

THE
BRITISH JOURNAL
OF
CHILDREN'S DISEASES.

VOL. X.

OCTOBER, 1913.

No. 118.

Original Articles.

CASES OF CHYLIFORM EFFUSION.*

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(1) CHYLIFORM ASCITES (TUBERCULOUS), WITH NOTES OF AUTOPSY BY
PROFESSOR BEATTIE.

IN 1903 an example of chyliform ascites came under my observation, and so uncommon are such cases that I have ventured to bring before this Section a short account of it, and I do so with greater confidence because a carefully made autopsy by Professor Beattie is added, and the case, if wanting in some clinical details, is, at any rate, complete from a pathological point of view. On July the 1st, acquaintance was first made with the patient, and he died on July the 28th, and the only clinical observations at hand are those made between these dates.

The patient, a lad, aged 18 years, belonged to healthy parents, and was the only delicate child of a family of eight. There was no tuberculous taint, except that a maternal aunt died from tuberculosis at the age of forty-seven. When aged $5\frac{1}{2}$ an attack of abdominal pain first came on, resembling peritonitis, followed a month later by a second attack with similar symptoms, and recovery was associated with

* The cases were reported to the Medical Section of the Royal Society of Medicine on May the 27th, 1913.

emaciation. In 1892, at the age of 7, there was a slight threatening of the old abdominal pain. For the next eight years the boy went to school, but a kind of delicacy of health was evident, and he became a student rather than one enjoying games. In the early part of 1903 the patient went abroad, and all doctors who examined him agreed that he suffered from tuberculous disease within the abdomen.

At the date of my first visit the patient was not confined to bed and appeared to have some enjoyment of life, but his aspect pointed to a grave condition. The swollen abdomen contrasted markedly with a thin, pale face, and limbs destitute of fat and poor in muscle. The face was expressive of prolonged physical depression rather than of pain, the disposition was quiet, the habits studious, and the appetite capricious. The costal margin was much displaced by prolonged pressure from below, the abdomen was moderately tense, and had a fluctuant wave all over. The anterior abdominal wall showed distended veins, and when he coughed fluid passed down the left inguinal canal into the scrotum. The enlargement of the abdomen had been remarked upon in 1897—*i. e.* six years before I saw him.

Dulness on percussion was found for a limited area above the umbilicus; elsewhere bowel seemed to float above the fluid.

The temperature, July the 1st, 4 p.m., was 101° F. There was no vomiting or cough, but diarrhoea was a prominent symptom. The urine was free from albumin and sugar; bile-pigment was present in small amount, but no jaundice of the skin was noted. From the history and from the physical examination a diagnosis of tuberculous peritonitis was arrived at and drainage of the abdomen recommended. Four days later visible pulsation of the heart was seen in the second and third interspaces, the liver was displaced upwards, and the patient complained of the tightness of his clothes. On account of the rapid respiration and cardiac displacement, an incision was made above the umbilicus, with the result of striking a milk-white fluid at once. Six pints were removed and a drainage-tube inserted, but the abdomen was not explored. After the tapping fluid was not felt again in the scrotum. I mention this as it proves that the fluid was free in the peritoneal cavity. A sample was referred to the Clinical Research Association, and the report received was as follows :

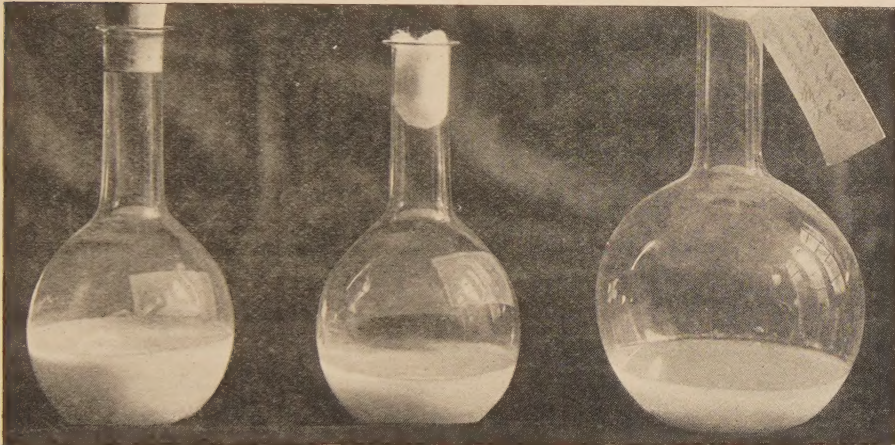
“This is a milky fluid of alkaline reaction and a specific gravity of 1005. It contains six parts per thousand of albumin and less than 0.2 per cent. of fat. On microscopic examination it is seen to contain an emulsion of fat and numerous bacteria, with certain extraneous matters, but no distinctive cellular elements can be found, and both

pus and blood are absent. Owing to the decomposed state of the specimen, its microscopic examination was somewhat unsatisfactory. In its characters the specimen does not differ from a transudation fluid, poor in albumin and of low specific gravity. Fluids of this character, when ascitic, are very frequently chylous, or rather, chyloid."

Summary of Case after Operation.

The incision was made on July the 7th, and death occurred on July the 28th. At first there was a free discharge of milky fluid,

FIG. 1.



July the 7th, 1903:
Chyliform ascites; tapping.

July the 9th, 1903:
Fluid run through tube.

July the 29th, 1903:
Fluid in abdomen post mortem.

but the tube was removed on the fifth day after the puncture. The temperature varied, being seldom normal or subnormal, and usually between 99° and 102° F.; during the last few days there was a gradual fall to 97° F. The tongue, at first coated with a thick white fur, cleaned after the operation; then became dry as the general condition changed for the worst. The pulse-rate was from 90 to 120, but no irregularity was ever noted. Perspiration showed sometimes about the head, then heat and dryness were seen. Towards the end large areas of capillary stasis appeared over the chest and abdomen, not disappearing on pressure; the face was occasionally cyanosed. The respiration varied from 24 to 38, and finally became irregular, and crepitations were heard over the front of the chest. After operation the appetite improved, and some

solid food was taken without sickness; vomiting was seldom noted. Towards the end strabismus and diplopia were noted, but the pupils remained equal. Speech became indistinct and confused; there was drowsiness and muttering during sleep.

The hands became restless and tremulous, some periods of excitement were passed, and the legs became sensitive to touch. The abdomen tended to increase in size, chiefly from flatus, and there may have been some reaccumulation of fluid. The kidneys continued to act sufficiently; sometimes micturition was difficult, and sometimes there was involuntary urination. Emaciation during the last week of life was very noticeable. There was slight right facial paralysis. Memory became defective. There were visual hallucinations, and the hands searched the air. From the squinting, facial paralysis, drowsiness and mental symptoms, it was concluded that tuberculous meningitis was present, but there were no convulsions or coma at the termination.

Duration of the Disease.

Judging from the appearance of the costal margin the disease had been going on for many years, perhaps even twelve, and dated probably from the attack of severe pain in the abdomen which resembled peritonitis. In further proof of the chronicity of the disease, it may be mentioned that when at school the boy had a delicacy of stripping before others on account of the protuberance of the abdomen. It is further suggested as probable that the severe attacks of abdominal pain in 1890 and 1891, during which the legs were drawn up and cries of agony were heard, were associated with distension of the lymphatic vessels behind the obstruction, with transudation of chyle within the peritoneum.

Although it cannot be said that the pain associated with transudation of chyle within the abdomen differs from pain due to other causes, yet it is somewhat suggestive in my two cases. In the tuberculous case there were attacks of acute abdominal pain, the cause of which was unrecognised.

In the second case, assumed to be due to pressure of glands in the neck, the sudden onset of acute pain created a suspicion of peritonitis. In Dr. Cayley's case there were symptoms pointing to acute peritonitis, ending in rapid death, in the same way that my case came to a sudden and unexpected collapse.

Report of Autopsy (by PROF. J. M. BEATTIE).

The body was emaciated; the abdomen was very much distended.

On opening the abdomen a chylous fluid escaped. This fluid was found to be free in the abdomen, but more on the right side than the left. It was, however, not shut up *in loculi*. Seventy-five ounces were removed. The intestinal coils and the stomach were very markedly distended by flatus; so great was this distension that the heart was pushed upwards. The peritoneum was thickened throughout, and was studded with minute, firm, tubercular granulations. There were no adhesions between the intestinal coils themselves, or between them and the abdominal wall. The omentum showed very numerous but extremely minute tubercular granulations. It was not thickened, and was not adherent, except to abdominal wall at the site of incision (operation). The mesentery was very much thickened, and the mesenteric glands greatly enlarged, many of them measuring fully 2 in. in diameter. The glands were pale, very firm, and on section showed no trace of caseation. The superior mesenteric vein and its branches were very much distended and the wall thickened. The main trunk was fully $\frac{1}{4}$ in. in diameter near its origin. In the region of the pancreas for fully $1\frac{1}{2}$ in. there was a mass of glands and fibrous tissue in the middle line. The fibrous mass was constricting the superior mesenteric vein and the splenic at their origin, so that the lumen at this point would admit only a very fine probe. The splenic vein to the left of the constriction was much distended, and passed through a continuation of the fibrous mass to the left. The receptaculum chyli could not be seen, and was apparently obliterated by this fibrous mass. The thoracic duct in the thorax showed no abnormality, but the lymphatic vessels in the mesentery were very considerably distended and their wall very greatly thickened. No ulceration or rupture could be made out.

Microscopical examination of sections of mesentery.—The main thickening was due to glandular enlargement and distension of veins and lymphatics. The glands showed numerous tuberculous foci. In most of these there was early caseation in the centre, with cellular proliferation round these areas and well-formed giant-cells. In some there was distinct fibrous formation round the nodules. The veins were greatly distended and their walls thickened. The efferent lymphatics showed a very marked distension, and the walls, especially the muscular fibres, showed considerable thickening. These lymphatic channels were very irregular, and contained numerous mononucleated cells, the nuclei being rounded and staining darkly. At places these cells were accumulated at the periphery of the channel, and appeared to be derived, at any rate in part, from proliferated cells lining the spaces. In some of these dense masses of cells there was a consider-

able amount of fibrin, in which the cells were entangled. At other places there was distinct evidence of organisation, young capillaries and young connective-tissue cells invading these masses of cells from the periphery of the vessel. Intestines: There was no evidence of ulceration, and no waxy degeneration. Liver: Both under the capsule and in the substance there were very numerous small tubercular granulations. Microscopically these are seen to be very early nodules, consisting of proliferated cells without caseation and without giant-cell formation. The bacillus of tuberculosis could be shown in small numbers. Spleen: The spleen was considerably enlarged, measuring



FIG. 2.—Section of lymphatic gland showing lymphatic channels with cellular thickening (tuberculous) of their walls, causing marked obliteration of their lumen. There is also extensive inflammatory change in the surrounding tissues. At the lower part there is a large tuberculous area. ($\times 26$.)

8 in. long, 8 in. broad at its upper end and 4 in. broad at its lower end, and 2 in. in thickness. It was bent on itself from without inwards in its transverse axis. It was firmly bound down to the abdominal wall by old adhesions, these adhesions being the only ones present in the abdomen. On section it was dark in colour and the pulp fairly firm. No tubercular granulations could be made out with the naked eye. Microscopically there are a few tubercular granulations, some of them showing mere cellular proliferations, others showing a slight amount of caseation, and here and there is a well-formed giant-cell. Kidneys: These showed fairly numerous small tubercular granulations scattered through the substance. Micro-

scopically there is very little abnormal, except the presence of early tubercular granulations. Lungs: Both showed a very extensive miliary tuberculosis. No evidence of cavity formation. Microscopically the tubercle nodules are seen to be very recent, the majority being in the cellular stage without caseation. No giant-cells were seen. At the periphery of the nodules the vessels are dilated, and at parts there is distinct hæmorrhage, the air-vesicles being filled with blood. Tubercle bacilli are present, but not numerous. The glands at the roots of the lungs were enlarged and resembled those of the abdomen. There was no enlargement of mediastinal glands. Brain: There was considerable flattening of the convolutions uniformly on the two sides. At the base there was a turbid, gelatinous exudation in the interpeduncular space, spreading forward over the optic chiasma, and laterally along the Sylvian fissure, and posteriorly to the surface of the cerebellum.

In the membranes over these regions there were very numerous tubercular granulations.

Summary of Autopsy.

Tuberculous disease was widely distributed throughout the body. The peritoneum, omentum, mesenteric glands, liver, spleen, kidneys, lungs, and brain all showed, either with the naked eye or with the microscope, a deposit of tubercle. As regards the lymphatic system in the abdomen, the receptaculum was apparently obliterated in a mass of glands and fibrous tissue, and the different lymphatics showed a very marked distension. Obliteration of the receptaculum and evidence of dilatation of the lymph-vessels behind the obstruction are the main features in the pathology, the morbid material is tubercle, and the method of chyliform ascites was by transudation. No perforation was found, and had a perforation or rupture existed, there would probably have been no distension of lymph-vessels.

Remarks.

This case is in some respects fairly complete, and can be read with those of a similar nature recorded by others. That the origin was a tuberculous disease affecting the mesenteric glands can hardly be doubted, and as it progressed the receptaculum chyli was subjected to pressure, and that chyle transuded for years seems the probable truth. Death was due to tuberculous infection of the membranes of the brain, after a long period, during which the disease was limited to the abdomen. All who saw the case during

the last months of life—amongst whom were Dr. Lewis Smith and Professor Greenfield—were agreed upon the presence of tuberculous disease within the abdomen, but the chyliform ascites met with at the tapping was wholly unexpected, and, in the absence of any recognised symptoms pointing to such an effusion, future operators upon such cases will probably meet with a similar surprise; for there is no diagnostic sign to indicate a chyliform ascites, short of tapping or exploratory incision. That the thoracic cage at its inferior margin indicated prolonged pressure from fluid in the abdomen is what would be met with in any case in a young subject, whether due to cirrhosis of the liver or ordinary ascites due to any other cause, but in my case the shape of the abdomen seemed to show that the fluid in the abdomen was collected more in the upper half, and thus it was that the incision made came above the umbilicus. Such a peculiarity might be of service in another case of a like kind. The fluid showing itself in greatest bulk beneath the costal arch might suggest that a cyst was present, but it will be remembered that the fluid was free in the abdominal cavity, as proved by its easy descent down the left inguinal canal during coughing.

The case of chyliform ascites published by Whitla in 1885 may be contrasted with my own in 1903. Whitla's patient was a boy aged 13; my case was a lad aged 18. In both tuberculous infection was the cause of the effusion, but with this important distinction: In Whitla's case a perforation of the receptaculum chyli was found, which had permitted pure chyle to escape for months. The analysis of the fluid showed that it consisted of pure chyle, and from December the 7th to February the 14th, or sixty-eight days, 15 gallons were drawn off, or 31 oz. per day, and yet the patient did not lose weight. In my case the fluid met with was not pure chyle, but a transudation through the walls of the lacteals, and the chemical analysis of the two effusions is very different.

(2) CHYLIFORM ASCITES ASSOCIATED WITH HODGKIN'S DISEASE.

The second example of chyliform ascites from transudation of chyle was due, I believe, to pressure on the thoracic duct at its termination, but there was no autopsy permitted in order to verify this. The case was one of lymphadenoma, or Hodgkin's disease, occurring in a girl, aged 18 years, who had not long before undergone two operations—first operation, May, second operation, June, 1912—for removal of masses of glands on the left side of the neck and in

the left axilla. On readmission to hospital in December, 1912, there were symptoms of peritonitis and fluid within the abdomen, and when tapping was done a milky fluid was withdrawn. The girl had become emaciated and colourless, and looked starved, in spite of rest in bed and careful attention to feeding. I would suggest, although it cannot be proved, that pressure on the duct at its termination caused a transudation of chyle within the abdomen, because there were, at the time, many more glandular enlargements at the root of the neck on the left side, as well as on the right.

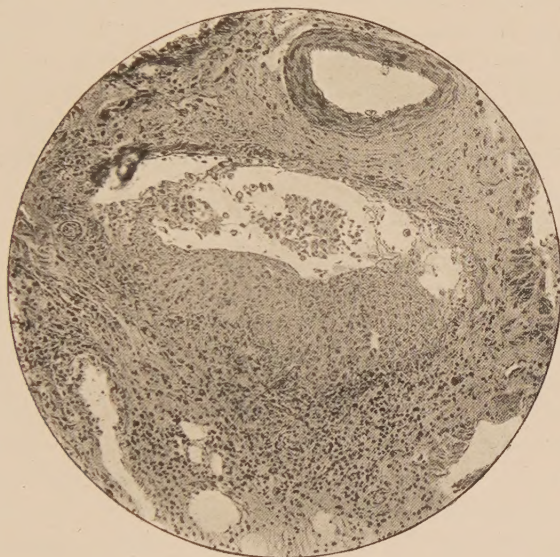


FIG. 3.—Section of lymphatic gland showing lymphatic channel with cellular thickening at one side, numerous mononuclear cells in lumen, lymphocytic infiltration in surrounding tissues. ($\times 100$.)

Whether there was any effusion of chyle within the thorax cannot be even surmised. Among the sixty-eight cases of chyloform ascites tabulated by Dr. Batty Shaw, there are eighteen due to compression of the thoracic duct or lymph-vessels by glands or neoplasms, and I believe that this case of Hodgkin's disease, in which there was a transudation of chyle, may safely be added to the number. The following is the laboratory report:

Report of Clinical Research Association on fluid from abdomen, December the 28th, 1912.—This fluid is faintly alkaline to litmus, has a specific gravity of 1011, and its albumin content 1.2

per cent. (Aufrecht). The centrifugalised deposit is moderate in amount, and consists almost entirely of pus-cells, together with a very finely emulsified fat. Films stained according to Gram's method demonstrate the presence of large numbers of streptococci. Tubercle bacilli are not detected in special preparations. The fluid when shaken up with ether loses some of its opacity, and from chemical analysis the quantity of fat, including lecithin, etc., is found to be 0.25 per cent. The fat is composed of finely divided globules, such as would occur in chylous fluid. For comparison we mention that Halliburton, quoting Hoppe-Seyler, gives the figure for total fats in human chyle as 2 per cent. roughly. There is undoubtedly pus present in the specimen, and a differential count shows 78 per cent. polynuclear leucocytes, while 22 per cent. are of the lymphocyte type. A typical streptococcus of the *pyogenes* type has been isolated from the specimen. The fluid was probably a chyle transudate admixed with pus, and much of its opacity is due to the presence of the latter.

GENERAL REMARKS.

The literature on milky ascites is accumulating, in spite of the cases, being few and far between, and I am anxious to acknowledge my indebtedness to Dr. Batty Shaw, to Dr. H. D. Rolleston and others, for their valuable contributions with which English science has been enriched. The interest in these cases lies very much in the fact that so many different causes may bring about a similar effect, so that, having a case of milky ascites in hand, it is by no means an easy matter to decide upon the originating cause. For example, of twenty cases collected by Rotman, only two are attributed to tubercle; and of nine cases of milky fluids in the thorax, only one was associated with tubercle. The chances are largely in favour of cancer, as six stands to two. According to some authors there is no clinical significance to be drawn from the nature of the fluids, but I think that chemical and microscopical examinations are of enormous aid in separating the many causes to which milky ascites may be attributed. A milky fluid may be pure chyle due to a leak, or it may be chyle which has transuded, or there may be in the fluid cells of various kinds, blood-corpuscles, lymphoid cells full of fat-granules, or epithelial cells with fat-granules, and such additions to a milky fluid might indicate the presence of cancer within the abdomen, with chyle leaking or transuding from lacteal vessels. Actual rupture of the receptaculum seems to be rarely met with; a transudation from

distension of lacteals happens oftener. With a leakage of chyle from a perforated receptaculum it is very difficult to see what could be done, and even with a transudation of chyle due to pressure on the receptaculum of years' standing it might prove impossible to extricate matted glands. For example, in the case mentioned, where glands at the root of the neck apparently prevented the flow of chyle into the veins, liberation of the pressure by removal of the glands might, if carried out without damage to the duct or vein, have checked the transudation of chyle within the abdomen. Faced with difficulties in dealing with disease marching on to an inevitable end, it is for the surgeon to afford relief to be obtained in no other way. I have a hope that a day may come when a remedial operation may be devised and carried out in cases of milky effusions or transudations within the abdomen or thorax. With dissemination of cancer, or of tubercle throughout the body, the chance of relief is gone, and the effort, if made at all, must be made in the early stages of the disease.

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OBSERVATIONS ON FOUR CASES OF RELAPSING PNEUMONIA IN YOUNG CHILDREN.

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PNEUMONIA, as it occurs in adults, is recognised as a disease possessed of very definite and notably uniform characters, whilst it is equally well known that the clinical manifestations of inflammation of the lungs and bronchi occurring in children are very variable.

The majority of observers skilled in diseases of the respiratory system subdivide the acute pneumonias of childhood into three groups, in which a very marked difference in mode of onset, course, duration and sequelæ is noticeable. Though somewhat difficult to differentiate by physical examination of the chest during life, it is possible to ascertain with some degree of accuracy the character and extent of the lesion in each group. So far as gross morbid anatomy is concerned, differentiation is possible, but microscopic appearances approximate so closely and the series of intermediate gradations between typical cases is so complete that the separation of the three groups by this means is difficult.

The type which is least common corresponds accurately in clinical aspect, physical signs and morbid anatomy with the lobar pneumonia of adults.

The second type is, perhaps, the most common. The child is taken suddenly ill with fever, respiratory distress, and a short, painful cough. On examination of the chest consolidation is found affecting a considerable area of lung-tissue, usually at the base of the lower lobe on either side, but not infrequently near the apex of the upper lobe, sometimes in the mid-lobe on the right side.

On account of the distribution of the lesions, this type of pneumonia is appropriately described as *lobular*. Like the preceding, this variety of pneumonia ends suddenly.

Crisis is rare in children, but ending by partial or imperfect crisis common. Usually, in pseudo-crisis, the temperature falls to normal in the latter half of the day but rises again to 102° F. at night, falling finally to normal the following morning; the process occupying from twelve to twenty hours. In pseudo-crisis, as defined, the process should occupy at most not more than ten to twelve hours.

Ending by lysis frequently occurs, but even then the process of defervescence is a moderately rapid one.

In lobular pneumonia adjacent lobules are frequently affected

during the same pyrexial attack, the result being that the greater part or the whole of a lobe may be consolidated. The condition is commonly described as confluent broncho-pneumonia, but is more strictly a confluent lobular pneumonia.

A third type of pneumonia is that associated with bronchitis, and due to an extension of the inflammatory process over a greater or less area of lung-tissue to the alveoli.

The gravest form of all the pneumonias which affect children is undoubtedly that described as suffocative bronchitis or acute capillary bronchitis, in which there is universal bronchitis and peribronchial pneumonia. When associated, as is not uncommonly the case, with laryngitis, this variety is almost always fatal.

The above classification is based almost entirely on the anatomical distribution of the pulmonary lesions. Pneumonias of childhood have been further classified as primary and secondary according to the causation of the illness; some difference of opinion exists as to the exact acceptance of these terms. Some, including the majority of French writers, regard secondary pneumonias as those which are consequent on the exanthemata, and group with these septic pneumonias due to the inhalation of virulent poisons; all other varieties of the disease are considered to be primary pneumonias.

Others classify as primary, pneumonias of sudden onset without antecedent symptoms; whilst, under the heading of secondary pneumonia, are included pneumonias occurring in bronchitis together with those due to inhaled irritants and the group which follows the exanthemata.

Dr. A. P. Beddard, in Allbutt and Rolleston's 'System of Medicine' (vol. v, p. 184), estimates the duration of pneumonia in children as being from one to two days to three or four months. The commonest duration is fourteen days, 70 per cent. of all cases lasting only from seven to twenty-two days, 10 per cent. for a shorter period, 20 per cent. for a longer. In certain cases pneumonic attacks lasting for several days with high fever and characteristic symptoms may alternate over a period of many weeks, with days during which the temperature is normal and the symptoms of pneumonia subside.

It is in lobular pneumonia that failure or delay of resolution is apt to occur and that relapse is common.

Certain well-defined clinical manifestations are generally present in relapsing pneumonia in children, and such cases may often be recognised at an early stage.

With a view to illustrate the salient points on which diagnosis of

relapsing pneumonia is based, I propose to describe four cases of pneumonia in which a succession of febrile attacks associated with lobular infection of the lungs alternated with intervals of normal temperature over a period of thirteen weeks.

CASE 1.—G. T—, aged 1 year and 7 months, admitted to St. Bartholomew's Hospital, November the 2nd, 1905.

During nearly a fortnight the child had seemed to his parents to be ailing, but his illness had taken no definite form until five days before admission, when he developed a severe cough and vomited twice. There was nothing in his family history to suggest pulmonary tuberculosis.

On admission he appeared fairly well nourished and when disturbed gave vent to a lusty cry. He preferred to lie on his back, his left cheek was flushed, he breathed rapidly and had a frequent short dry cough.

At the bases of both lungs posteriorly *râles* were heard, most numerous on the right side and audible also in the axilla. In the left axillary line the physical signs indicated the presence of an area of pneumonic consolidation at about the level of the seventh rib.

Two days later signs in the chest were more definite and extensive; on November the 6th the temperature fell to 96° F., and physical signs had so far disappeared that only a few *râles* scattered at both bases were heard. There was slight discharge from the left ear.

A severe relapse occurred the same evening, however, and a very considerable area of fresh lung-tissue on both sides of the chest became involved, almost the whole of the left lung, excluding the apex of the upper lobe, showing evidence of consolidation; the greater part of the right lower lobe was also affected.

So alarming did the child's condition become in the fourth week of the illness that exploratory acupuncture of the chest was performed. No fluid was obtained.

On December the 5th a fresh area of consolidation appeared at the right base, and the temperature remained irregularly raised until well into the sixth week of the disease.

On December the 19th pneumonia had spread to the base of the right upper lobe, and the child was taking its food so reluctantly that nasal feeding was employed. The grave condition persisted until December the 28th, but signs in the right lung gradually cleared up, the area at the angle of the left scapula alone remaining.

Fresh patches of pneumonic consolidation with corresponding

rises in temperature continued to occur, and on January the 9th the child was much weaker, and its spleen was felt to be greatly enlarged.

On January the 23rd there was improvement in condition and physical signs; on the 26th fresh physical signs were found at the lower angle of the right scapula, but this appears to have been the final relapse in the course of the case. On January the 28th the temperature fell, and from the 30th remained subnormal; the child rapidly improved, and all the physical signs in the chest disappeared. The patient finally left hospital on March the 7th fully recovered after a fever lasting thirteen weeks and a total stay within hospital of more than four months. At least eight distinct relapses associated with fresh physical signs occurred in the course of the attack.

CASE 2.—J. W—, male, aged 1 year and 6 months, admitted to the Hospital for Sick Children, Great Ormond Street, on April the 9th, 1906.

Seven weeks before being brought to hospital the child had had measles followed by bronchitis. Systematic physical examination showed some limitation in movement of the left side of the chest. At the left base posteriorly pneumonic consolidation was present.

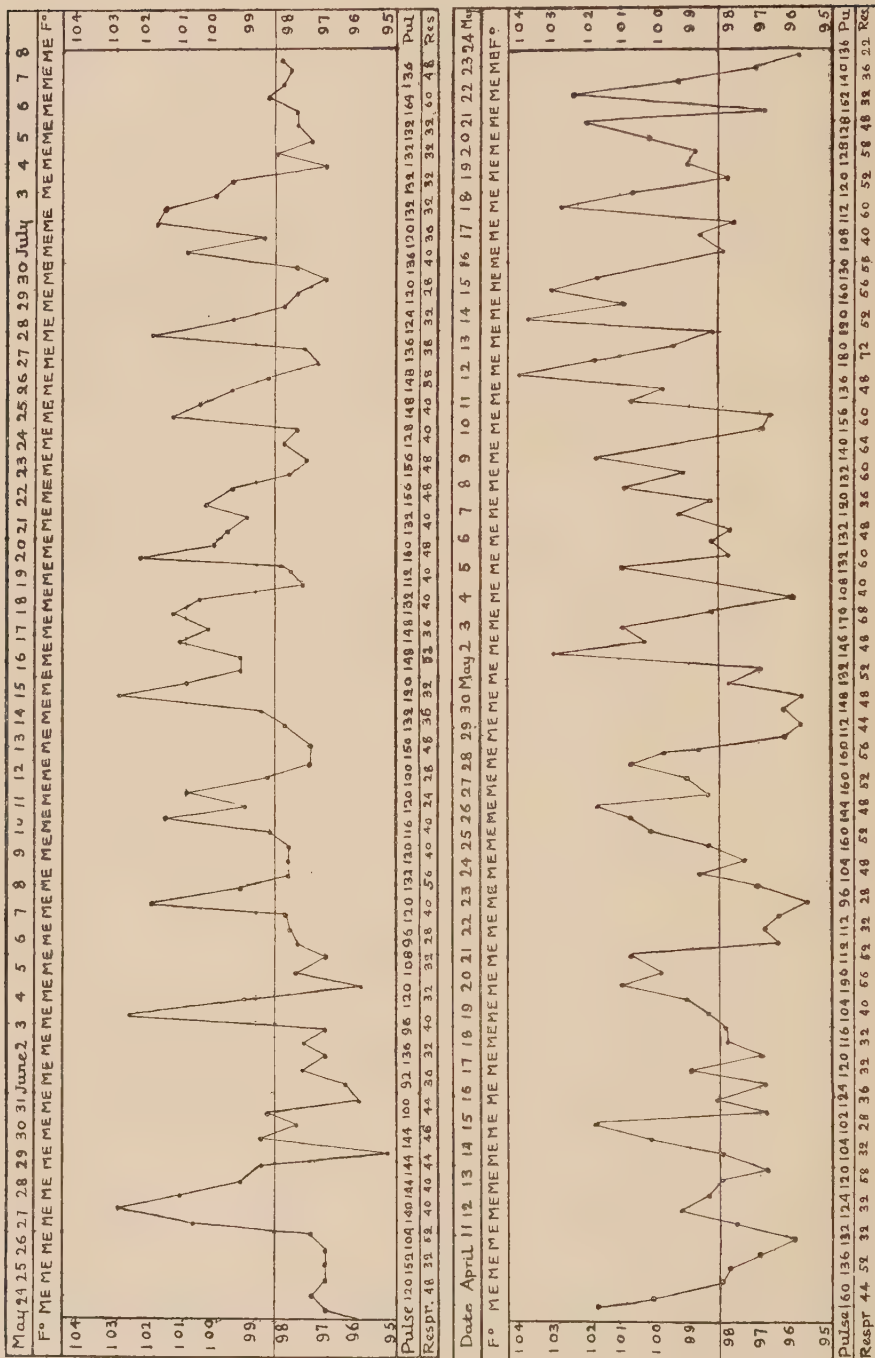
On April the 17th the temperature was still irregularly raised, but the child did not seem distressed, and he had actually gained a quarter of a pound in weight.

Examination of the chest showed some pneumonic infiltration at the right apex and an extensive pneumonia occupying the greater part of the lower lobe of the lung on the left side. Over this area the physical signs were such as to suggest the possible presence of a fluid effusion. Breath-sounds were scarcely audible, vocal resonance was greatly diminished and no added sounds were heard, but the heart was not displaced.

On April the 23rd signs at the left base were less well marked, but three days later there was such definite impairment on percussion at the left base that exploratory acupuncture was performed just below the inferior angle of the left scapula. Only a few drops of blood-stained fluid were withdrawn.

As the result of a severe relapse ten days later, the whole of the left lung had become the seat of pneumonic consolidation, whilst there was a well-marked compensating emphysema of the right lung, and of that part of the anterior margin and apex of the left lung which had escaped infection.

In addition, pus was discharged from the left ear. The spleen



was enlarged, so that its lower border could be felt one inch below the left costal margin.

Uncertainty still existed as to the presence or absence of an effusion into the left pleura. In view of the extreme importance of early drainage in empyema thoracis the left pleura was again explored; the result was negative.

From May the 3rd until May the 22nd the temperature rose, sometimes remaining over 101° F. for several days, at others descending to 96° F., but never remaining at or below normal for so long as twenty-four hours. Gastritis and occasional vomiting were associated with the high and long-continued pyrexia; as a result the child lost $1\frac{1}{2}$ lb. in weight.

On June the 14th the temperature rose to 103° F.; respirations, 48 per minute, were laboured but suppressed and the cheeks flushed.

Signs of early consolidation appeared at the apex of the right lung. A week later the child seemed to be improving somewhat, and the signs at the left base had completely disappeared, but the following day fresh signs of pneumonic infiltration appeared at the lower angle of the right scapula and at the back of the chest over the apex of the right lung.

On July the 3rd the temperature fell to normal and no fresh pyrexial attack developed. The child gained steadily in weight, was out of bed on July the 13th, and out of doors on the 20th.

On July the 28th it left hospital completely recovered, and nothing has been heard of it since. (*Vide* chart.)

CASE 3.—L. H—, female, aged 1 year and 8 months, admitted to St. Mary's Hospital, March the 8th, 1911.

On February the 24th, twelve days before admission, the child was suddenly taken ill with cough, shortness of breath, and vomiting. On admission, she was found to be fairly well nourished, face very flushed, no herpes, breathing at 60 per minute, with a short expiratory grunting noise. The right middle and lower lobes of the right lung were consolidated. Leucocyte count 50,000 per c.c. No meningismus. Urine contained no albumin.

From the twelfth to the twenty-fourth days of the disease the temperature was rather irregular, dropping on two occasions to normal. After this the temperature remained normal for four days, the respirations sinking to 26 per minute.

During the fifth week of disease (twenty-eighth to thirty-fifth days) there was another wave of pyrexia, associated with some spread of the pneumonia into the lower part of the right uppermost lobe.

During the sixth, seventh and eighth weeks the temperature ran a very irregular course, reaching normal on nine occasions but never remaining normal for more than thirty-six hours. The signs in the lungs showed no variation nor did the course of the fever suggest that fresh areas of pneumonia were occurring. The signs of consolidation in the right lung remained, and the percussion note at the right base was extremely dull and very resistant. On several occasions the right base was explored with a needle, once thoroughly under an anæsthetic, but no pus was obtained at any time. A skiagram afforded no evidence of pleural effusions. During these weeks the child was losing weight and was very seriously ill. It was noticeable that there was a very extensive growth of soft downy hair on the cheeks and upper lip, down the back and on the arms. This growth had occurred during the illness and was not present on admission.

During the eighth week a pure growth of pneumococcus was obtained by puncturing the solid lung. From this a vaccine was prepared and doses of from 3 to 7 million organisms were given about twice a week.

During the ninth week the temperature became of a regular swinging type, with a difference of 5 to 6 degrees between the morning and evening readings. The pyrexia, which lasted eight to twelve hours out of the twenty-four, was associated with marked flushing of the cheeks, much tachypnœa, and with grunting expirations, giving the clinical picture of acute pneumococcal toxæmia.

From the tenth to the thirteenth week the condition improved. The child put on weight, and during the afebrile periods became able to sit up and play with her toys. The temperature became much less regular, although it still showed a good deal of swinging variation. The afebrile periods gradually lengthened and lasted one, two, or three days, while the pyrexial attacks became shorter.

During the twelfth and thirteenth weeks the temperature was rather more sustained but it was not high (102° F.). At this time signs of consolidation were found in the lower lobe of the left lung. During the previous few weeks the signs at the right base had been slowly disappearing, and only some impairment of note was left there.

At the end of the thirteenth week (ninetieth day) the temperature reached normal for the first time for ten days, and from this time onwards convalescence proceeded satisfactorily with no further rise of temperature. The child began to lose the growth of hair which had developed, there being a notable diminution of this in the next

three weeks. The last abnormality in the lung to disappear was a generalised condition of slight bronchitis.

CASE 4 corresponds in many respects with Cases 1, 2 and 3, but differs from them in being neither so prolonged nor so severe. In this case the earlier attacks of pneumonia were each associated with definite new physical signs, but in later attacks, though symptomatically well defined, the temperature was seldom raised above 100° F., whilst on physical examination it was difficult to discover that fresh areas of lung-tissue were involved.

P. S—, male, aged 10 months, was admitted to the Hospital for Sick Children, Great Ormond Street, on February the 2nd; it was stated that two days before admission he had been taken suddenly ill with high fever and dyspnœa.

On examination of the chest it was found that the lower lobe of the right lung was consolidated, and that there was diffuse bronchitis and perhaps an early stage of infection of the peribronchial alveoli at the left base.

On the second day after admission temperature fell to normal, but ten days later the temperature again rose, and during the next six weeks five distinct relapses, associated with new physical signs, occurred.

At the end of the sixth week of illness attention was called to the curious aspect of the child. At no time of more intelligent cast of countenance than is commonly met with in his class, he seemed gradually to become more and more listless and inert. His hair, which, on admission, had been profuse, became straight, coarse and luxuriant, and spread downwards over his brow in the manner described as a "widow's peak." His lashes and brows became long and coarse. He developed a growth of hair over the back—particularly the scapulæ and along the vertebral spines and on the elbows and arms. His subcutaneous tissues became thickened, his complexion pale and earthy coloured. In fact he came to have the strumous appearance characteristic of children suffering from a very chronic form of pulmonary or abdominal tuberculosis.

On March the 23rd, on considering the prolonged duration of the case together with these remarkable changes, it seemed possible that the infection might be due to tubercle bacilli. An attempt to elucidate this was made by applying von Pirquet's cutaneous tuberculin test: there was no response to the inoculation.

Three further relapses occurred at intervals of a few days, but on April the 8th the temperature had fallen to normal and all signs of consolidation of the lungs had subsided.

The patient left hospital on April the 20th completely recovered. The illness had lasted only nine weeks—a considerably shorter period than in the three previous cases described. The clinical characters of the case, however, were so similar to those already described that it was considered probable that the child would remain free from pneumonia, if not for the rest of its life, at least for a very considerable period of time.

We were not a little surprised, therefore, when, on May the 22nd, the mother again brought her child to hospital suffering from pneumonia.

From the time when it left hospital until three days before readmission the child had been in good health. It had then become fretful, listless, feverish at night, and the following day breathed with just the same characteristic grunting expiration as had attracted the mother's attention at the onset of its illness in February. She was suspicious, therefore, that it was again suffering from pneumonia and accordingly brought it to hospital.

On readmission there was no doubt that the child was again suffering from an acute pneumonia. He was restless, his skin was hot and dry, his mouth and tongue were parched and covered with sores, and there was a crop of herpetic vesicles on his lips; he was suffering from marked dyspnoea, with short dry cough and considerable cyanosis of the lips and face.

In order to ascertain the nature of the organism responsible for the attack, an area of consolidated lung was explored; the pneumococcus was grown in pure culture from the fluid so obtained.

After May the 30th no further rise in temperature occurred. The patient made uninterrupted recovery and left hospital on June the 14th.

He had gained weight while in hospital and appeared none the worse for his experience.

His acquaintance with pneumonia was not at an end, however. Nearly a year later, in April, 1912, he was again brought to hospital at night with a precisely similar attack of acute pneumonia, the consolidation being localised at the right base and lower angle of the right scapula with scattered crepitant sound audible below the right clavicle in front. His spleen was enlarged and palpable.

Temperature fell by pseudo-crisis. On April the 8th it rose again to 102° F. and then fell, together with the pulse and respiration-rate, by lysis to the normal level, at which it remained till the patient's discharge on April the 21st; the spleen was then no longer to be felt.

So far as the type of disease is concerned, all four cases quoted

alike appear to have been primary pneumonias. In Case 1 the child had been unwell during several days before the sudden attack of pneumonia came on.

In Case 2 the child had certainly suffered from measles and bronchitis seven weeks before, but the interval between its attack of measles and the comparatively fulminant onset of pneumonia was sufficiently great to negative the possibility of the pneumonia being a direct consequence of morbilli. Furthermore, the local distribution of consolidation in the lungs and the absence of generalised bronchitis were very unlike the condition commonly present in the broncho-pneumonia which follows measles.

In Cases 3 and 4 the onset of the illness was definite, sudden and unassociated with previous illness. Further, the character and extent of the consolidated areas support the view that in each case a lobule or series of lobules were successively the seat of disease.

The type of disease under consideration may, therefore, be described as a primary lobular relapsing pneumonia.

No further inference can be drawn as to the spread of the disease from lobe to lobe. In the early attacks the base of right and left lung was commonly affected. Infection frequently occurred in the neighbourhood of the lower angle of the scapula, an area of lung which is frequently the seat of consolidation in air-borne infections, owing to the fact that it corresponds very nearly to the distribution of one of the main bronchioles which convey air to the lower lobe.

As relapse followed relapse, in every case the upper portions and even the apices of the lungs became affected.

Nor is there evidence in the cases described that an area of lung-tissue once affected enjoyed for that reason immunity from subsequent pneumococcal infection.

In two out of four cases the pneumococcus was proved to be the cause of disease; in view of the predominance of this organism in primary pneumonias and the similarity of the cases quoted, there is strong presumptive evidence that this organism was responsible for each of the four cases recorded.

It may readily be supposed that some variation exists in individual susceptibility to pneumococcal infection of the lungs, and it is possible that one explanation of the frequent relapses in the cases described lies in the fact that the patients were possessed of a degree of resistance and response to pneumococcal infections considerably below the average.

From this standpoint, a somewhat remarkable change in the character of the disease during the thirteen weeks of its course is

significant. In the first attacks of pneumonia and in the earlier relapses bouts of pyrexia are prolonged, the temperature chart shows wide excursions, and the intervals of normal temperature are short. General disturbance is marked and dyspnœa at times urgent. Associated with each attack are definite fresh physical signs. As the illness progresses, however, the reverse condition becomes apparent; fever bouts are short, temperature never rises to a very high level, whilst fresh areas of pneumonic infiltration, if present, are very difficult to define.

In conformity with a less grave type of disease, constitutional disturbance is less and the children may actually gain weight—a point of some diagnostic and prognostic importance.

It is in the later stage of the illness that splenic enlargement may occur. Enlargement of the spleen is frequently associated with conditions in which infection of the blood-stream by micro-organisms is known to be present; even in malignant endocarditis the enlargement is often due to the septicæmia itself.

In Case 1 the swinging type of fever strongly suggested the presence of a blood infection. It is possible, therefore, that enlargement of the spleen recorded in the cases under discussion may be taken as evidence of the escape of pneumococci from the lungs into the blood-stream.

It is not to be supposed that a distinct variety of lobular pneumonia exists of thirteen weeks' duration, including eight or more relapses. At the same time prolonged relapsing cases of lobular pneumonia are not uncommon which approach in clinical characters those chosen as the subject of this thesis, and considerations based on the most prolonged cases may be applied to relapsing pneumonia in general.

Diagnosis is based largely on the occurrence of definite attacks of pyrexia, separated by intervals of normal temperature. The aspect of the patient becomes after a time of some assistance in this respect.

Reference may be made to a class of pneumonias occurring in young children, described by Dr. R. Miller,* in which pyrexia is prolonged without intermission. A variety of causes are assigned by the author for the condition, but in each of the groups considered the condition is a severe one, and mortality increases in direct proportion to the duration of the fever.

In the cases under discussion, however, the prognosis appeared to

* "Some Cases of Protracted Pyrexia in Pneumonia in Children," *Trans. Med. Soc. Lond.*, 1910, xxxiii, p. 197.

be good. Recovery, as has been stated, was usually complete. Resolution of the consolidated areas always occurred, and the lungs regained their normal condition. Infection of the lungs in no case led to empyema. Sequelæ, such as fibrosis of the lung with bronchiectasis or secondary infection of the lung by tubercle bacilli, do not occur so far as the limited evidence goes which is afforded by the cases studied. Treatment is directed towards support of the strength of the patient, and offers no special point for discussion. The administration of brandy is a most valuable means of tiding over the severe stress of the later relapses.

Of vaccine treatment little can be said. Though exhibited in Case 3, it is difficult, in view of the evidence of the other cases, to conclude that vaccine treatment was a determining factor in bringing the case to a favourable ending.

Exploration of the lung is chiefly of value in the diagnosis of effusions. It may be noted, however, that in Case 2 improvement occurred soon after acupuncture had been performed. This experience is frequently confirmed in practice, and the question remains open to discussion and investigation as to whether local or perhaps general changes are brought about by exploration of the lung, as a result of which the patient reacts more vigorously against the organism which is attacking him.

The cases quoted are of interest in that they mark a gradation of properties amongst such diseases as smallpox in which one infection confers life-long immunity, through typical lobar pneumonia, a disease in which later attacks seldom occur, up to rheumatic fever characterised by frequent relapses, each productive of greater susceptibility to attack rather than protection from re-infection.

Though a family tendency to rheumatic fever is well known, there would seem no comparable "pneumonic diathesis" in the relatives of the cases of relapsing pneumonia described.

Of special importance are the observations which have been made on the appearance and disappearance of the so-called strumous characters in the course of a prolonged infection due to another organism than the tubercle bacillus.

Growth of hair on the shoulders may also sometimes be noted in neglected cases of empyema thoracis in which no attempt has been made to drain away the pus.

That the strumous changes are the result of pneumonic toxins seems possible, and this conclusion has been of service repeatedly in safeguarding a child suffering from long-continued pneumonia from a diagnosis of pulmonary tuberculosis until thorough investigation of

the case by physical examination, the analysis of sputum if obtainable, tuberculin reactions, skiagrams or fluid obtained by acupuncture have determined diagnosis.

The association clinically of relapsing pneumonia with tuberculosis is of value in that open-air treatment of relapsing pneumonia is suggested by it. The great success which attends open-air treatment of empyema thoracis supports this indication.

The similarity in appearance and manners between certain of the children suffering from chronic pneumonia and cretins suggests that treatment with thyroid extract might sometimes be of assistance in promoting resistance to infection from pneumococci.

In conclusion, I beg to express my sense of gratitude to Dr. A. E. Garrod for permission to make use of the records of Cases 1, 2 and 4, and to Dr. R. Miller for the loan of his notes on Case 3.

A CASE OF CUTANEOUS DIPHThERIA.

By WM. B. JACK, M.D.,

Kendal.

CASES of cutaneous diphtheria seem to be of sufficient rarity to be worthy of being reported, although the literature of the last twenty years contains a number of such. They are chiefly ulcers and impetiginous sores yielding organisms indistinguishable from the Klebs-Loeffler bacillus. In some cases the virulence of the bacilli has been tested and their diphtheria-producing power proved; in others, the rapid healing of chronic ulcers under antitoxin treatment indicated the true nature of the sore. These sores are usually associated with diphtheria of the throat or nose in the same individual, or in others in close contact. In institutions, for example, the condition has been found to exist fairly extensively. Thus E. H. Place, in the Boston City Hospital, found cutaneous diphtheria in such skin lesions as impetigo contagiosa, lupus vulgaris, abscesses on the neck and face, and varicella lesions. Similarly Heelis and Jacob found it in broken chilblains in children, attention being specially directed to them by the simultaneous occurrence of faucial diphtheria.

From the bacteriological point of view Prof. Kanthack put the matter thus: "The diphtheria bacillus is in my opinion widely distributed; frequently in modified forms it is true, but still in such,

as, except by artificial and imaginary criteria, such as would not be recognised in the case of other micro-organisms, cannot be separated from the Klebs-Loeffler bacillus, which even under the best condition is a highly polymorphic organism."

In connection with cutaneous diphtheria the classical writings are those of Trousseau, Daviot and Bretonneau. In the course of an investigation into an epidemic of diphtheria, Trousseau found that in certain villages the impetiginous sores of the children suddenly assumed a virulent character. Instead of the ordinary superficial scabbing, the wounds became painful, began to discharge, and a greyish membrane appeared on their surface. Usually the ulcers became chronic, with thick edges and membrane on the surface, but sometimes a spreading gangrene set in with gradual poisoning and death. Trousseau laid down the dictum that such cutaneous diphtheria was always preceded by a breach of surface; Daviot, on the other hand, is as definite in his statement that he had most commonly seen such cases occur without a previous lesion. While present-day views of bacteriology suggest that Trousseau was right, the possibility of the occurrence of cutaneous diphtheria without breach of surface, *i.e.* a blood infection, cannot be dismissed offhand.

Goodall and Washbourn describe diphtheritic pustules yielding thin pus and producing ulcers slow to heal, and often free from membrane; they also mention that primary infection of the fingers may occur.

G. C. Garratt, in a paper "On Acute Diphtheritic Whitlow in Persons apparently Healthy," reviewed the literature up till 1904 and added three cases of his own. He points out that such cases may be a real source of danger, and that, occurring as they do in persons who show no other signs of diphtheria, they are likely to escape recognition.

The following cases bear out the last statement, as the case of purely cutaneous diphtheria would not have been recognised but for its association with a case of diphtheria of mucous membranes.

On February the 20th, 1913, I was summoned to see a girl, aged 3 years. Her mother reported that the child had had "sores on her face" for about three weeks, and a "cold in her nose" with discharge for about two weeks. She had been playing about the house till the evening before, when she seemed ill, and became hoarse. It was also stated that two weeks before that day, a cat had scratched the child's forehead. The cat was a clean one, and not ill, so far as is known. The scratch did not suppurate.

Condition February the 20th, noon: Temperature 102° F., pulse

120; respirations somewhat forced, with some retraction of the lower ribs. There was a frequent cough, croupy in character, with hoarseness. From both nares there was a purulent discharge. Excoriation was seen below both nostrils, but no other sore on the face. The throat was clear so far as I could see, and there was no enlargement of cervical glands. There was a smell from the patient suggestive of diphtheria. A swab was taken from the nose for examination.

The child became rapidly worse. At 6.30 p.m. the temperature was 102° F., the pulse weaker, and the eyes were sunken. For the first time there had been bleeding from the nose. The respiration was more embarrassed, and the child had been struggling for breath.

At 9.30 p.m. 4000 units of diphtheria antitoxin were given.

At five next morning the child died.

The swab showed almost pure culture of diphtheria bacilli.

Mrs. P—, aged 28 years, the child's mother, said she had been feeling ill for a week. On February the 13th she knocked her left elbow on a piece of furniture; later, on that day, she observed a red spot above her elbow, and thought she was going to have a boil there, as it felt hot. That evening she "shook all over, and could not get warm in bed." For the next four days she was confined to bed with headache, pains in the limbs and general malaise, which she believed was due to influenza; while she was in bed the skin of the sore elbow broke without her observing it (there being no sense of relief of tension as in a boil). An ulcer has continued since then. On the third day of her illness she observed a similar sore spot, one inch above the right elbow, which also turned into an ulcer.

February the 20th: She was feeling much better than she had done. Temperature normal, pulse 72, no sore throat (nor has there been any). On the tip of the left elbow was an ulcer, less than a three-penny piece in size, with a sharp circular edge, and with a floor of soft granulations, with some yellowish discharge. The right arm showed a similar but smaller ulcer, one inch above the olecranon. Both ulcers were very tender. A swab from the left was taken and showed diphtheria bacilli. No swab was taken from the ulcer on the right arm.

Two thousand units of antitoxin were given on the 21st and the ulcers were painted with phenol and dressed with boracic lotion. Although carefully treated healing took place very slowly, and it was six weeks before the process was complete.

In order to test the virulence of the organisms a second swab was taken a week after the first, but no diphtheria bacilli were found.

The patient's general condition kept good, and no post-diphtheritic sequelæ have arisen.

In reference to these cases several points call for comment. First it must be noted that the child had sores on her face before she had a discharge from her nose, and in view of the existence of diphtheria bacilli in many cases of impetigo this route of infection is a possibility. Against this is the fact that except for the excoriations below the nares the sores had healed at the time the child became dangerously ill.

No great stress can be laid on the scratch on the brow by the cat, as that did not suppurate and was not apparent when I saw the child. Still, the possibility of the cat being a carrier must be allowed. There was no other case of diphtheria in the village where the patients stayed, so far as is known.

The child's case is included here chiefly on account of the mother's, as the latter doubtless received her infection from the former. The question of chief interest is: Were the mother's lesions diphtheritic from the outset? The child's nasal discharge of two weeks' standing would provide plenty of infective material, and as the mother was in the habit of resting her bare elbows on the table it is easy to conceive of these being brought in contact with diphtheria germs. Any abrasion of the skin is, however, hypothetical. In view of other recorded cases (none of them on the same site), I am of the opinion that these were primary diphtheritic pustules, and in view of this have considered the case worthy of record.

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Philadelphia Pediatric Society.

June the 10th, 1913, THEODORE LE BOUTILLIER, M.D., President.

Cerebellar Ataxia.—Dr. CHARLES W. BURR presented this case, which was interesting as he was not altogether sure of the diagnosis. The boy is

now twelve years old. Birth was normal. He was breast-fed. At one year he had a convulsion while teething. The mother says that he has never seemed really well since the convulsion, but is unable to give any clear account of his illness. He did not learn to walk until eight years old. He has never talked well. At present he exhibits markedly ataxic gait; good station with eyes open or shut; no ataxia in the arms; slight lateral nystagmus on looking to the left; at times slight nystagmus when eyes are at rest. The fundi are normal. The knee-jerks vary from time to time; ordinarily they are very marked, sometimes they appear decreased. When decreased, it is due to the fact that the boy is inhibiting movement. Stroking the outer side of the right sole causes extension of the great toe and slight extension of the small toes. Stroking the left sole causes flexion of all the toes. Speech is somewhat thick. There is no facial paralysis and no palsy of the tongue. He has had no schooling and is very ignorant, but his mental power is much better than appearances indicate. Dr. Burr at first thought the case one of pure cerebellar ataxia, but after further study of it concluded that it was one of those instances of combined cerebellar and posterior cord disease. The case is not a familial one.

Cases of Congenital Pyloric Stenosis.—Dr. LEVI J. HAMMOND.—Wide-spread interest in congenital pyloric stenosis began in 1888, and has held a conspicuous place in the literature dealing with impaired gastrointestinal drainage with increasing interest up to the present time. There seems to be no controversy between pædiatrist and surgeon as to the frequency of its occurrence, though there still exists a reasonable difference between them as to the wisdom of placing all degrees of stenosis in the surgical category. The condition as an entity becomes perfectly clear when we keep before us the embryologic and anatomic development and physiologic function of this portion of the digestive tract. Congenital stenosis may be accounted for through vice in development of the organ itself, or defect in the development of some of the determining organs with which it shares in the process of formation, as, for example, the liver, the formation of both of which is from the right primary foregut. This defect may occur as an inverse twisting or a reverse growth of the longitudinal or circular fibres, or both. It seems possible for the rather intricate anatomic arrangement of this organ to meet with disaster in its embryologic development, either in defect of structure alone or by faulty position in which it may be placed by the liver, which is claimed by some biologists to influence the pyloric development through a shortening or twisting of the primary foregut. It is therefore not uncommon to meet such co-existing lesions as hernia, dilatation of the colon, cardio-vascular disease and supernumerary organs. In none of Hammond's patients was there visceral transposition. Anatomically the pylorus is formed by a reduplication of mucous membrane from the stomach, intermixed with muscular fibres having a definite function of dilatation and contraction. These muscular fibres are aggregated into a thick circular ring, the longitudinal fibres and serous membrane taking no part in the formation of the ring, though they pass directly over it. The orifice differs greatly in shape; it is occasionally oval; sometimes a circular fold is replaced by a crescentic one, placed one above the other below the orifice; more rarely there is but one crescentic fold. There is no organ in the body the position and shape of which presents more frequent alterations and possibilities of anomalous changes than the pylorus.

The pathogenesis still lends itself largely to a theoretic discussion. The

problem must involve a consideration of those factors entering into developmental tissue defects. H. I. Nicoll says it may be the result of a primary congenital developmental aberration, possibly connected with the junction at the pylorus of two different processes of development; or it may be the result of congenital hypertrophy of the muscular walls of the pylorus secondary to antagonistic and inco-ordinate action of the stomach on the one hand, and the walls of the pylorus on the other; or it may be dependent on functional disorder of the gastric nervous system; or it may be the result of spasmodic contraction, arising from gastric irritation after birth and therefore not congenital; or the condition may be the result of a chronic inflammatory process. Neither of the last two theories could be assigned by those who have had the opportunity to study the actual pathology as found on the operating table or under the microscope. The babies are, as a rule, plump and well formed at birth. Abnormalities in development are at times found, being analogous congenital anomalies. More than half of the recorded cases were breast-fed babies. The earliest symptom is vomiting, beginning soon after birth or delayed several weeks; at first only simple regurgitation after feeding, later persistent and unyielding to all remedies. As the dilatation of the stomach increases, vomiting may be delayed until after two or more feedings, when the entire quantity will be expelled. It is projectile in type, and is not believed to be accompanied by nausea. If the food has been in the stomach some time it will be ejected partly digested, which is proof that the digestive power of the stomach is not at fault. If the occlusion is not complete, there may be some bile staining the vomitus. The epigastrium becomes prominent, due to the dilated stomach, while the hypogastrium is scaphoid because the intestines are empty. If occlusion is not complete, scanty stools will be passed occasionally; when complete, the stools will consist mainly of bile-stained mucus. After feeding, the peristaltic wave of the contracting stomach through the thin abdominal wall can be plainly observed rolling from cardia to pylorus. At times the tumour can be felt in the region of the pylorus, though more often the liver, which is invariably enlarged, so covers it over as to prevent its being palpated. In two of Hammond's cases the tumour could certainly not be felt; in one it was doubtful; in the fourth it was distinctly palpable. The peristaltic wave was typical in all. The other symptoms are those incident upon persistent vomiting, such as loss of flesh, progressive emaciation, exhaustion, subnormal temperature, and the classic picture of marasmus. That functional spasm plays a considerable rôle in the production of mere symptoms cannot be doubted. The alternating improvement and relapses commonly seen would indicate it, as would also the cases believed to be cured by medical treatment. The types, from a diagnostic standpoint, may be grouped into three classes: those in which marked hypertrophy exists, with little, if any, spasm; those in which a moderate degree of hypertrophy is present with spasm as the major factor in the occlusion; and an intermediate class, when both exist, but neither the hypertrophy nor the spasm is intense. Even with greatly thickened walls there is not of necessity complete obstruction; the degree of hypertrophy and of spasm varying widely in different patients. It is logical to suppose that patients in whom the signs and symptoms have been typical of pyloric obstruction, yet which recovered under purely medical treatment, were those in whom spasm had been the most prominent element and the degree of hypertrophy moderate. It is, however, inconsistent with our knowledge of the function of the pylorus to suppose that any

degree of hypertrophy, even though it be minor, could exist without causing symptoms of impaired gastric drainage. Some physicians question whether these cases are truly congenital, or whether there is hypertrophy secondary to spasm, the latter being post-natal, from irritating food or hyperacid secretion. The demonstrable existence of symptoms so soon after birth in a healthy breast-fed infant would seem to discourage such a belief, and there must surely be but few persuaded to the belief that an infant nursing from the breast of a healthy mother could supply the stomach with sufficient irritation from the food taken to produce symptomatic spasm. Especially is such a belief difficult to maintain when the operating table demonstrates the existence of such definite pathology. It is conceivable that functional spasm might occur in adults from long-continued indiscretion in diet, which so alters the normal gastric secretion as to produce irritation, but even in such an instance Dr. Hammond believes that some degree of hypertrophy is present and the actual underlying cause of the spasm.

The differential diagnosis must be made from simple recurrent vomiting due to improper or over feeding, from extrinsic causes such as tumour in neighbouring tissues like retroperitoneal growths, and from visceral adhesions. It is claimed by some that the presence of acetone and diacetic acid in the urine is a point of differential value in distinguishing cases of simple recurrent vomiting from pyloric spasm. In some cases differentiation cannot be made unless it be in the lesser severity of the symptoms, less rapid and less progressive loss of weight, which would be expected were the obstruction away from the pylorus and incomplete. Where spasm is the major factor in the obstruction, marked improvement with sudden relapses should be the most classic differential point. A definite tumour is always demonstrable, consisting of a circular indurated growth, occupying the entire circumference of the pyloric site; in some instances it is more or less cylindrical in shape, extending well into the first portion of the duodenum. Its serous surface is smooth and usually not adherent to the neighbouring tissues. Microscopic study shows a great increase in thickness of both circular and longitudinal fibres, the greatest thickness being noted in the circular fibres. Considerable proliferation of the connective tissue is also demonstrable, the thickness in some instances amounting to two or three times that found in the pylorus of normal children of the same age. So extensive is this hypertrophied tissue that it would be contrary to logical reasoning to assume that either was of post-natal origin; it was present in all of Dr. Hammond's patients, from forty-two to sixty days of life; hence it could not possibly have thus developed. Two infants were born of the same parents, the boy being 42 and the girl 60 days old when seen. From history and symptoms it is believed that total obstruction had existed in the first case eight and in the second four days before operation. The third infant, a girl, was 50, and the fourth, also a girl, was 56 days old when first seen. The history in the former was eight, and in the latter six days, of total obstruction before operation. All were emaciated to the greatest possible degree, but promptly gained in weight and health after operation had established free gastric drainage. As this condition is surgical from the onset, medical treatment should not be employed longer than is necessary to establish the diagnosis. This applies alike when the cause is either one of persistent spasm or hypertrophy, for even though the obstruction be due to spasm alone, which is hardly conceivable, such patients die from inanition if the spasm is intense, prolonged and frequently recurrent; hence it is as dangerous as hypertrophy. Within a few hours after operation has established free drainage, nourishment can be taken in small quantities,

and increased to full feeding in three days. Surgical treatment should consist in either pylorotomy or posterior gastro-enterostomy; the former is indicated where the pathology is demonstrably localised. As this is not often possible, posterior gastro-enterostomy is to be chosen to meet the greater number of indications. The early recognition of the precise nature of the condition and prompt operative treatment before tissue cell resistance has too greatly ebbed away should result in the recovery of at least 80 per cent. of patients.

Unusual Neurosis in a Child.—Dr. A. A. HOWELL, by invitation, reported this case, in which a high-strung child, aged 8 years, from the initial symptoms of vomiting and “water-brash” developed a neurosis. The chief manifestation of this neurosis was a spasm of the muscles of the tongue and throat, similar to, if not actually accompanied by, laryngospasm. From a therapeutic standpoint especial emphasis was laid on the fact that while carefully directed treatment at home proved futile, under the advantageous surroundings of a hospital it was entirely successful.

Dr. J. CLAXTON GITTINGS said that it was not possible to describe adequately the miserable condition of this boy when at his worst. He had attacks at intervals of fifteen to twenty minutes by day and ten minutes at night, with not more than two hours’ continuous sleep. While the diagnosis of a neurosis is a dangerous one to make, the elimination of all adequate organic causes justified it. The only possible point of reflex irritation was a very small amount of adenoid tissue in the nasopharynx; the attacks began before the acute coryza, however, so that the adenoids can hardly have originated them. While hysterical vomiting is not so rare, laryngospasm in a boy of 8 years inducing vomiting, is unique in our experience. Nor will hysteria explain the greater frequency of the attacks at night, which robbed the boy of his sleep. Whatever the exciting cause may be in these cases, Dr. Gittings has found that the neuroses are most apt to occur in the type of nervous child who is excessively pampered and never adequately controlled, who never learns in childhood, at least, to exercise self-control. The good results of hospital treatment are due primarily to the “moral impression” which, in turn, makes the strict regimen possible.

Dr. HOWELL added that, at times, during the course of this boy’s treatment at home, it would seem that satisfactory progress was being made, when relapses would occur. These were at first unexplainable, but upon close questioning of the mother it was found that the boy, who was supposedly quite at home, had in reality been catching for his brother, a pitcher. It was also found that at these times he would slip off to see base-ball games, and in all probability, without his parents’ knowledge, play himself. The continued talking of the father, in the boy’s presence, of his symptoms and condition and the paralleling of this with those of his brother who had died could not be stopped and undoubtedly did harm. The above are cited as examples of the hopelessness of gaining complete control of a case at home unless the unreserved co-operation of patient and family can be depended upon.

THE NATIONAL ASSOCIATION OF TEACHERS OF THE DEAF.

A great advance in the education of the deaf child was made at the Eighth Biennial Conference of the National Association of Teachers of the

Deaf, held in Glasgow from July the 29th to August the 1st. There can be no doubt that the opposition to the full expansion of the oral system of teaching the deaf is growing less, and becoming more and more confined to those persons of the narrow calibre and limited reasoning powers that supply all opponents of progress. Oral teaching is, primarily, an effort to furnish that physiological training of the speech centres of which, by reason of his deafness, the deaf child is deprived. For years it has been an astounding anomaly that teaching for the blind and normal child has been compulsory at the age of five, whilst that for the deaf child is delayed until seven. The natural corollary of scientific oral teaching is that the earlier it commences the better will be the results. Hence the resolution, passed by between 60 and 70 votes to 13, at the Glasgow meeting, marks an important advance in deaf education. This resolution was as follows: "That this Conference is of opinion that the compulsory commencing age of deaf children should be brought into line with that of normal children and of blind children; that, provided suitable arrangements are made, deaf children should be permitted to attend school from the age of three years, and that grants should be payable in respect of such children attending school."

Among other work done was a long and sympathetic discussion on co-operation between the teacher and the doctor, introduced by Mr. Macleod Yearsley, of London, upon which occasion the chair was occupied by Dr. Kerr Love, of Glasgow.

Abstracts from Current Literature.

Medicine.

Three cases of teeth present at birth (*Journ. de méd. de Bordeaux*, 1913, XLIII, p. 263).—**P. Balard** and **C. Commes**.—During a period of ten years among 17,578 children born in the Maternité de Paris, only three had teeth at birth, and during the last twenty years at the Bordeaux Clinique d'Accouchements there were only two cases among 10,000 births. The writers' first two cases occurred in a male and female infant respectively. A lower median incisor was seen in each case on the day after birth and the following day its fellow appeared. As suckling was thereby rendered painful to the mother the teeth were extracted. Neither child presented any other anomaly and their family history was negative. In the third case, that of a male infant, the two lower median incisors were present at birth but fell out spontaneously three weeks later. The child also had a congenital cyst of the iris. Microscopical examination of the teeth of the first two cases showed they were of the nature of a teratoma. J. D. ROLLESTON.

Caries of the milk teeth (*Brit. Med. Journ.*, 1913, I, p. 992).—**H. E. H. Tracey** makes the following recommendations regarding teeth extraction in children: (1) When a tooth is painful on mastication, either from pulpitis or periodontitis, extract. (2) When the tooth has an abscess or chronic sinus, extract. (3) If the tooth has an interstitial cavity on the side near a permanent tooth, remove before the latter is affected.

J. ALLAN.

The relationship between enlarged tonsils and carious teeth ('*School Hygiene*,' 1913, iv, p. 24).—**H. Maughan Brown** gives a table showing that there is a greater percentage of children with enlarged tonsils among those who have carious teeth than among those who have none. On the whole the greater the number of carious teeth the greater the percentage with enlarged tonsils. Also there are more cases of markedly enlarged tonsils among those with carious teeth than among those without.

MACLEOD YEARSLEY.

Auto-vaccination of the tongue ('*Berl. klin. Woch.*,' 1912, XLIX, p. 2407).—**W. Lublinski**.—A girl, aged $2\frac{1}{4}$ years, five days after vaccination, in addition to the normal evolution of the vaccine pustules on the arm developed considerable swelling of the tongue and had difficulty in taking her food. On the eighth day the temperature was 101.8° F., the cervical glands were enlarged, and the swollen tongue showed seven patches between the lips and the circumvallate papillæ. The lesions were surrounded by a red areola, were covered by a yellowish-white deposit, and on the following days discharged a yellowish fluid like that from the vaccine pustules on the arm. Inoculation had taken place by the child touching her arm directly after vaccination and putting her fingers in her mouth. The tongue was treated by applications of alum solution and complete recovery took place. There are no other instances of auto-vaccination of the tongue, but there are two cases on record where the mother's tongue was inoculated by kissing the arm of her recently vaccinated child (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, VI, p. 36).

J. D. ROLLESTON.

Neoplasms on the dorsum linguæ in infants ('*Riv. di Clin. Pediat.*,' 1913, XI, p. 20).—**M. Pincherle** describes two cases. In one an enormous aphtha was seen on the dorsum, irregularly oval, about 12-15 mm. in diameter, colour dirty yellow, elastic, and in volume about the size of a large bean; in the other the swelling was harder and about 1 cm. in diameter. The author considers them examples of granuloma telangiectasicum, and belonging to the category of human pseudo-botryomycosis.

VINCENT DICKINSON.

Primary purulent inflammation of the salivary glands in early infancy ('*Arch. f. Kinderheilk.*,' 1913, *Baginsky Festschrift*, p. 462).—**J. Lewin** records a case in a premature female infant, aged 14 days. The inflammation in the right parotid, which was first affected, subsided without operation; the left parotid was incised and staphylococci were found in the pus. Recovery took place (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, IX, p. 227).

J. D. ROLLESTON.

Congenital atresia of œsophagus ('*Am. Journ. Dis. Child.*,' 1913, v, p. 143).—**J. Brennemann** reports three fatal cases of the "inosculating" type in which the upper end of the œsophagus ends in a free dilated pouch, while the lower end passes from the stomach into the trachea. The symptoms were the same in all, viz. vomiting, cyanosis, emaciation, constant flow of saliva from mouth and frothy discharge from nostrils. In the first case jejunostomy and in the second gastrostomy was performed, and in the third no operation. The first case showed two ureters on each side and microscopical anomalies of the spinal cord, and the third case had a single horse-shoe kidney. All had broncho-pneumonia. A review of the literature is given (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, IX, pp. 429, 553).

J. D. ROLLESTON.

Prolonged inanition following cicatricial stricture of the œsophagus cured by internal œsophagotomy and dilatation ('*Bull. et mém. Soc. méd. Hôp. de Paris*, 1913, xxxv, p. 1195).—**B. Weill-Hallé** and **Abrand**.—A girl, aged 6½ years, swallowed a solution of caustic potash in mistake for white wine in February. Recovery from the acute symptoms of poisoning took place within a fortnight but persistent vomiting after food occurred. Extreme emaciation ensued, so that when seen by the writers in the following October her weight was that of a baby eleven or twelve months old—9 kilos instead of the average 17 kilos. Œsophagoscopy showed the presence of three strictures—one at the upper end, another 7 or 8 cm. below, and a third at the cardiac end. The second stricture, which was 7 or 8 cm. long, was treated by internal œsophagotomy and rapid recovery took place.

J. D. ROLLESTON.

Rumination in infants ('*Arch. f. Kinderheilk.*, 1913, *Baginsky Festschrift*, 1913, p. 116).—**H. Brüning** narrates a case in a child, aged 3 months, and compares the five cases described in the literature. Four occurred in females and two in males—a direct antithesis to the cases met with in adults, where only one case was in a female out of thirty-three cases collected by Wirtz. The condition commenced between the third and seventh months in all the cases: the nutrition of the children was markedly reduced. Only one case ended fatally. In none of the cases was there any history of a similar condition in other members of the family. Two were illegitimate and one was premature. In two cases the children were artificially fed. Disturbances of digestion were present in all cases before the condition appeared. The motor function of the stomach was not disturbed. Various drugs have been tried without avail, and washing out of the stomach does no good. Lust considers the condition due to a functional spasm of the pylorus; Mayerhofer, to relaxation of the cardiac end of the stomach; others, including the author, to neurosis of the motor function of the stomach.

F. R. B. ATKINSON.

Gastric motility in infants as shown by the Röntgen ray ('*Amer. Journ. Dis. Child.*, 1913, v, p. 345).—**M. Ladd** publishes some interesting results from the examination of a series of cases given bismuth meals. He administered two heaped teaspoonfuls of subcarbonate of bismuth in 2 oz. of milk. His examinations were by means of radiographic plates taken every half-hour. He did not use the screen owing to the risk of burns. He finds that bismuth passes out of the stomach as soon as the feeding is completed, showing that a considerable amount of food passes into the duodenum without undergoing gastric digestion. The stomach appears to pass on the greater part of its contents in from 1½ to 2½ hours. The residue remains in the stomach for 4½ to 7 hours unless food is again given, in which case the residue is got rid of much more quickly, not mixing with the second feed. The effect of alterations in the diet was also studied. It was found that when the fat or protein were given in full proportions, emptying of the stomach was delayed; but the author thinks it possible that a moderate (2 per cent.) amount of fat may act as a stimulant to gastric peristalsis.

REGINALD MILLER.

A case of congenital pyloric stenosis (Landerer-Maier type) in an infant and development of hour-glass stomach ('*Jahrb. f. Kinderheilk.*, 1912, lxxvi, p. 695).—**F. Schäfer** states that no case of this kind has been

published before the one he describes in an infant, aged 5 months. Post-mortem examination revealed a small fistulous pylorus without any development of a sphincter and the fundus and pyloric part were sharply divided.

F. R. B. ATKINSON.

Hypertrophic pyloric stenosis; gastro-enterostomy at the age of 13 days; recovery ('*Bull. et mém. Soc. méd. Hôp. de Paris*, 1912, xxxiv, p. 868).—**P. Fredet** and **L. Tixier**.—This is the earliest case on record of an operation for hypertrophic stenosis and also the earliest case of gastro-enterostomy. The symptoms started on the ninth day. Medical treatment was ineffectual and posterior gastro-enterostomy was performed on the thirteenth day. The writers review the literature, and give a bibliography of cases published since the monograph of Fredet and Guillemot (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, viii, p. 334).

J. D. ROLLESTON.

Spasm of the pylorus and congenital pyloric stenosis ('*New York Med. Journ.*, 1913, i, p. 57).—**H. Koplik** states that there are cases of spasm of the pylorus, which during life may or may not give a palpable tumour, and which at operation give a palpable tumour which persists post mortem. Microscopical examination may show the tissues to be thickened, but whether this is the result of hypertrophy or of contraction of muscle, future investigation will show. Pyloric spasm is a distinct entity and causes the same explosive vomiting as hypertrophy, and marked peristalsis with perhaps a palpable pylorus. Koplik classifies cases as: (1) Pure spasm of pylorus without any palpable pylorus, characterised by peristalsis, explosive vomiting, loss of weight and constipation, complete or relative. (2) Pyloric spasm with relative and actual stenosis and slight or marked thickening or hypertrophy of the pyloric tissues. There is explosive vomiting and constipation, complete at first, and later faecal matter may appear in the stools. (3) Congenital hypertrophy of the pylorus with stenosis. Spasm is here present also, and the symptoms are the same as in the second group, but more severe. Koplik records examples of each variety. He considers the affection to be a neurotic one and sometimes hereditary. He mentions cases in two sisters, one of whom had two babies similarly affected. Recovery depends on the patient's resistance, the skill of treatment and the severity of the condition. Many cases of the hypertrophy recover under medical treatment alone. Cases of spasm alone never require the surgeon; the mixed ones can usually be cured medically; 90 per cent. of Koplik's apparently hopeless cases have recovered without operation, while the mortality of some surgeons is 50 per cent. Koplik thinks that the suggestive work of Cowie and Lyon on the acid control of the pylorus in infants and the mechanism of the opening and closing of the pylorus, explained by Pavloff, afford indications for feeding which should be carefully examined.

J. PORTER PARKINSON.

Significance of the pyloric reflex in true and pseudo-pyloric stenosis in infants ('*Amer. Journ. Dis. Child.*, 1913, v, p. 225).—**D. M. Cowie** discusses the influence of the reaction of the gastric contents upon the opening and closure of the pylorus. He regards on theoretical grounds hyperchlorhydria as a likely cause of true pyloric stenosis as well as of pseudo-stenosis. He does not, however, bring forward any cases intermediate between the two conditions, and has met with only cases of hypertrophic stenosis in which achlorhydria was present.

REGINALD MILLER.

Intra-gastric malformation ('*Post-Graduate*,' 1912, xxvii, p. 1118).—**A. Bonner** considers this case unique in that bile was found in the vomit, though it turned out to be one of pyloric obstruction. It occurred in a male child, aged 4 weeks, who had digestive troubles soon after birth. On opening the abdomen the stomach was seen to be greatly distended, so that the greater curvature reached to the symphysis; posterior gastro-enterostomy was performed successfully, and ten days later the child went home; after a week of indifferent care it died. At the necropsy there was found a duplication of the mucous membrane of the stomach springing from the greater curvature near the pylorus, so as to form a valve sufficiently strong to close off the pylorus altogether in the normal direction, though a reversed flow could allow fluid to pass from the duodenum into the stomach. The writer has failed to find a similar case in the literature.

J. PORTER PARKINSON.

Diagnosis and pathogeny of duodenal ulcer in infancy ('*Jahrb. f. Kinderheilk.*,' 1912, lxxvi, p. 542).—**H. Flesch**.—Of 364 cases in the Buda-Pesth Kinderasyl who came to autopsy, 11 cases, or 3 per cent., the youngest of whom was 6 weeks and the oldest 6 months, showed peptic ulcers, 10 in the duodenum and 1 in the stomach. In most the ulcer was associated with gastro-intestinal catarrh. In every case the duodenal ulcer was situated above the ampulla of Vater. The duodenal mucosa in this position is especially liable to peptic ulcers in atrophic children, partly through absence of the antipepsin present in the stomach, and partly because it is not protected by the alkaline bile and pancreatic juice. Flesch reports a case in a boy, aged 3 months, suffering from severe carbohydrate food disturbance. The diagnosis of duodenal ulcer was made during life from the occurrence of bloody stools, hypothermia and collapse. Post mortem four ulcers were found in the duodenum above the ampulla of Vater.

J. D. ROLLESTON.

Fat and nitrogen metabolism in a case of congenital absence of the bile-ducts, with a study of ferments of the pancreatic secretion of the fæces ('*Amer. Journ. Dis. Child.*,' 1913, v, p. 36).—**H. Koplik** and **B. B. Crohn** find as a result of an examination of this case in a child aged 10 weeks, that (1) nitrogen metabolism is normal; (2) fat metabolism is much disturbed, and is characterised by poor absorption and deficient splitting of neutral fats; (3) the pancreatic ducts are patent and the secretion of normal strength; (4) the lipolytic ferment of the pancreas, while present, functionates weakly on account of the absence of bile-salts.

F. R. B. ATKINSON.

Abscess of the liver in childhood ('*Rev. Soc. Méd. Arg.*,' 1912, xx, p. 684).—**P. De Elizalde** records three cases. (1) Boy, aged 5 years. Insidious onset without intestinal symptoms. Considerable improvement after operation, but ten days later the temperature rose again and remained high in spite of two further operations. Post mortem, multiple hepatic abscesses were found. The *Staphylococcus pyogenes aureus* only was found in the pus. (2) Boy, aged 3 years. History of intestinal trouble since the age of six months. Rapid improvement after evacuation of the hepatic abscess, which contained a pure culture of staphylococci and no amœbæ. (3) Boy, aged 7½ years. Sudden onset and rapid course, with high temperature, shivering, icterus, and a leucocytosis of 32,000. Recovery followed operation. The pus was sterile. In neither the first nor the third case could the origin of the abscess be discovered.

J. D. ROLLESTON.

Cirrhosis of the liver in a child, aged 8 years (*Ann. de méd. et Chir. Inf.*, 1913, xvii, p. 65).—**G. Variot** and **Cailliau**.—The boy lived with its drunken parents and was always given wine to drink; he was wasted and markedly jaundiced. The abdomen was enlarged from meteorism and ascites; the liver was not enlarged, but the spleen was bigger than normal. There was cedema of the scrotum, but not of the legs. The tongue was dry, and there was occasional green vomiting not containing blood. The urine was scanty, darkish in colour, but did not contain sugar nor albumin; bile-pigment was present. There was some bronchitis and pleural effusion on the left side. The evening temperature varied from 100° to 103° F. The ascitic fluid was twice removed, first 1 litre and then 1½ litres. Death occurred in coma. At the autopsy the liver was small, weighing 382 grms., it was greenish with yellow spots, hobnailed, with slightly thickened capsule. The cirrhosis was portal and intralobular. There was much brownish pigment containing iron, but no fatty degeneration. The spleen weighed 275 grms., was large and hard. The kidneys were large, capsule not thickened and stripping easily, cortex pale and pyramids congested. Lymphocytes were seen between the glomeruli and tubules and there was degeneration of the tubular epithelium. There was some tubercular deposit in the lung. The heart was small with fatty infiltration. This is an example of cirrhosis due to the drinking of wine, but no other form of alcohol.

J. PORTER PARKINSON.

Acute yellow atrophy in a child aged 3 years (*Arch. of Ped.*, 1912, xxix, p. 737).—**F. Huber** reports this case and describes the pathological findings. He also discusses the literature of the subject.

F. R. B. ATKINSON.

Hydatid cyst of the liver (*Med. Press. and Circ.*, 1913, i, p. 390).—**E. M. Corner** reports the case of a girl, aged 3 years and 4 months, who came under observation with symptoms suggestive of appendicular mischief. At the operation a large cystic tumour was found attached to the right lobe of the liver just to the left of the gall-bladder. The pathological report was that the tumour was a hydatid cyst.

J. ALLAN.

Bacteriology of the acute intestinal diseases of infancy (*Amer. Journ. Dis. Child.*, 1912, iv, p. 75).—**B. S. Veeder**, **R. Kilduffe** and **O. T. Denny** have studied in particular the occurrence of dysentery organisms in the stools in acute intestinal diseases of infants. The clinical cases were those classed as ileo-colitis, either acute or acute-on-chronic. Their conclusions are as follows: (1) The mere presence of a few dysentery organisms does not prove that they are the cause of the condition. It is only in the severe cases of ileo-colitis that these organisms are present in the stools as one of the predominating types, and it is these cases which show distinctive lesions of dysentery at autopsy. (2) In only about 20 per cent. of cases of ileo-colitis of infants are dysentery organisms found: in some the infection with these organisms is primary, but in others it is probably secondary. (3) Cases of ileo-colitis in which dysentery organisms are present cannot be separated clinically from those in which they are absent. (4) Streptococci are present in the stools of about 80 per cent. of the cases of ileo-colitis; probably in some instances these organisms are the cause of the condition.

REGINALD MILLER.

The cœliac affection ('*Dub. Journ. Med. Sci.*,' 1913, I, p. 241).—**H. C. Drury**.—A girl, aged $3\frac{1}{2}$ years, came under observation for recurrent attacks of diarrhœa, which resisted treatment and had been becoming more frequent. She had wasted greatly and had become weak and listless. There was no vomiting. The abdomen was much distended and she passed three or four very copious motions every day. The motion was in appearance and consistence just like porridge, but whiter, and the odour was quite unnatural and extremely disgusting. No treatment did any good until the child was fed on raw meat and meat extracts. Later she was given thin toasted bread, finely shredded lean meat, fish, beef-tea, chicken broth and water. Under this dietetic régime the alvine discharges became normal and in the course of two or three weeks she improved greatly. She became much brighter and put on weight. The cause of this disease is not known. J. ALLAN.

Ætiology and pathology of dysenteric enteritis in children ('*La Pédiatrie*,' 1912, xx, pp. 505 and 561).—**M. Lo Re** publishes his researches on this question as his thesis. Out of ten cases he was not able to isolate a single example of that bifid form of bacteria which constitutes a large part of the intestinal flora of children under normal conditions. In the cases referred to various micro-organisms were found; in two cases the streptococcus of Hirsch and Libbmann; in one case a strepto-coli-bacillary combination; in three cases *B. coli*; in one case *B. perfringens*; in one case *Proteus vulgaris*; in two cases Shiga's dysenteric bacillus. The origin of the infection could not be ascertained in most of the cases. The disease seems to have some connection with the saprophytic organisms of the digestive tube, especially with *B. coli*, either the common variety, or the para-coli, also with streptococci, especially those of Hirsch and Libbmann, and with *proteus*, either isolated or in symbiosis with some other organism. In such cases it must be admitted that the said microbes require special pathogenic properties through changes in the intestinal condition. The disease has also some relation with the anaërobic *perfringens* and with dysenteric bacilli. It seems, therefore, that there is nothing specific about the ætiology of dysenteric enteritis, and that it may be caused by different microbes, and these microbes may cause either the disease under discussion or any other form of infantile enteritis. Whatever the cause, the symptomatology of the disease remains the same. VINCENT DICKINSON.

Acute colitis in children ('*Progrès méd.*,' 1912, XL, p. 521).—**Hutinel** and **Nobécourt** made a communication on this subject at the Thirteenth Congrès français de médecine. The best classification is based on the character of the evacuations. *Acute mucous colitis* has three forms: the benign, which lasts only a few days and is characterised by mild symptoms; the grave, corresponding to the follicular enteritis of Widerhofer, or the dysenteric of Marfan, lasting five or six days, and marked by vomiting, complete anorexia, high fever, anxious expression, dry skin, muco-purulent and bloody stools, and often ending fatally with dyspnœa, convulsions, erythema, etc. *Localised* forms are more common in adults, typhlitis and sigmoiditis, from which the differential diagnosis of appendicitis is very difficult, and may be grafted on to congenital affections of the colon such as Hirschsprung's disease. Colitis may be at the onset dysenteric; it resembles dysentery, and is associated with great pain, purging, tenesmus, and stools like frog-spawn, or dark brown and muco-purulent. Recovery is frequent. The third principal class of colitis is represented by *dry cholera*, often

caused by excess of milk diet. The symptoms comprise green vomit and stools, marked change in the facies, cold extremities, oliguria, slow irregular pulse and nervous phenomena. The secondary manifestations of colitis are numerous, *e. g.* stomatitis, tonsillitis, intestinal hæmorrhage and appendicitis, the existence of which is often not noticed, and especially periodic acetoneæmic vomiting, whose origin is freely intestinal. Cystitis is common in girls and pyelitis possible; jaundice may occur. Broncho-pneumonia occurs less frequently than in other infantile affections. The nervous system often suffers, as is shown by convulsions, meningeal symptoms and even tetany and a slight spinal lymphocytosis. Neuritis of the pneumogastric has been noticed by Renon. Erythemata of a polymorphous type are common and may be associated with purpura. Lastly there may be œdemas due to retention of chlorides. The ætiology of primary colitis in children consists of three factors: faulty diet, especially too much cow's milk or eggs, affections of the nasopharynx, and contagion. Age, heredity, previous constipation also take part. Secondary colitis is due to malformations, intestinal parasites, general infectious diseases, measles, scarlatina, typhoid and even meningitis. Treatment consists in lavage with hyposulphite 50 per cent., peroxide of hydrogen 50 per cent., or nitrate of silver solution 0.20 per cent. Ipecacuanha and guarana are often efficacious. Calomel, except in divided doses of 1 to 5 cgrm., may be dangerous, and the authors prefer as a purgative either sulphate of magnesia or castor oil. The different glands may be stimulated by multiple extracts, pancreatic, hepatic, or suprarenal. In severe forms camphorated oil and serum with caffeine are indicated, with hot baths or compresses.

VINCENT DICKINSON.

Helminthiasis in children ('*Amer. Journ. Dis. Child.*' 1912, iv, p. 378).—W. W. Murphy examined the stools in 102 cases of children from 2 to 12 years of age. Eight cases (6.86 per cent.) were infected with intestinal parasites. His cases were from Chicago, and show a much lower proportion of infection than the 28.57 per cent. of Schloss of New York. The *Trichiurus trichiura* was found in 4 cases, *Ascaris lumbricoides* in 2, *Tænia saginata* and *Trichimonas intestinalis* in 1 case each. Only a small proportion displayed any obvious symptoms. Eosinophilia was not constant, but when present it accompanied other clinical manifestations. Its degree bore no relationship to the type of parasite harboured.

REGINALD MILLER.

The frequency of intestinal parasites in children in Rio de Janeiro ('*Arch. de méd. des enf.*' 1913, xvi, p. 29).—J. G. Faria examined the fæces in 1238 children up to twelve years of age. Intestinal parasites were found in 662 (53.4 per cent.). The parasites were as follows: *Trichocephalus trichiurus* 446 times, *Ascaris lumbricoides* 432 times, *Necator americanus* and *Ankylostomum duodenale* 120 times, *Strongyloides stercoralis* 58 times, *Tænia saginata* 22 times, and *Oxyurus vermicularis* 11 times. The youngest child was three months old.

F. R. B. ATKINSON.

Surgery.

Congenital absence of ribs ('*Journ. Amer. Med. Assoc.*' 1913, lx, p. 895).—Carroll Smith records the case of a female infant in whom the seventh and eighth ribs on the left side were entirely absent. The first, second and third ribs were normal but close together, while the fourth and fifth were fused. About 1.5 cm. of the sixth rib attached anteriorly to the

same length of cartilage was found in the thoracic wall without any connection of the rib or cartilage to the vertebral column or sternum. The spinal column was defective on the left side at the level of the sixth and seventh ribs, and was covered with smooth pleura at the place where these ribs should normally be attached. The ninth, tenth, eleventh and twelfth ribs were floating. The xiphoid process was bifid, and there was a slight scoliosis of the spine with the convexity to the right at the level of the defective region. The scapula was scaphoid, the ductus arteriosus patent and the foramen ovale open. In the spinal cord a double canal was found in the thoracic region. There was microscopical evidence of syphilis and signs of the disease in the family, none of whom, however, showed any abnormality of the ribs. The child died eight days after birth from pneumonia. Although the arm of the child fitted accurately into the thoracic defect, the author is of opinion that, considering the other abnormalities present and the entire absence of two ribs, the condition was due to an inherent defective development rather than to pressure *in utero*. An account of nine other somewhat similar cases is appended (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1913, x, p. 217).
T. R. WHIPHAM.

Congenital anomalies of the umbilicus (*'Brit. Med. Journ.,'* 1913, i, p. 173).—G. C. E. SIMPSON, in a paper read before the Liverpool Medical Institution, described three cases of laparotomy for congenital exomphalos. In one the major part of the liver was included in the sac. In two cases of ectopia the trigone of the bladder had been implanted into the sigmoid portion of the large intestine. The one lived for four months, dying from pyelitis. The other died from the shock of the operation. The anomalies of the urachus were discussed and a case of urachal umbilical polypus was described. Cases of umbilical polypi due to abnormalities of the vitelline duct were considered. Four had been treated with success. The results of a Meckel's diverticulum were illustrated in various forms.
J. ALLAN.

Congenital myxoma of the feet (*'Amer. Journ. Dis. Child.,'* 1913, v, p. 374).—Mello-Leitão records a case in a male infant, aged 11 months. At birth the feet showed two symmetrical tumours on the dorsum, each the size of a hen's egg. Their development was slow and did not interfere with the child's health. An arthroplastic operation was performed, and the child recovered, though the operation was not a great success. The tumour proved to be a pure myxoma.
J. D. ROLLESTON.

Congenital diaphragmatic hernia in a three-year-old child (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, p. 550).—F. REISS.—The child died suddenly whilst sitting up, and on section the greater part of the stomach and the spleen were found in the pleural cavity.
F. R. B. ATKINSON.

Congenital hernia of the diaphragm through the œsophageal opening, extra-pleural, and occurring in the right thorax; two cases contrasted and compared (*'Austral. Med. Gaz.,'* 1913, XXXIII, pp. 359-366 and 387-391).—H. RISCHBIETH describes two cases occurring in a child dead at full term, and in a woman, aged 82 years. The stomach, spleen, pancreas, great omentum, duodenum, jejunum and the greater part of the ileum were situated in the thorax in the former case. The hernia had a sac and was thus a "true" hernia, and had passed through a greatly enlarged œsophageal aperture.
F. R. B. ATKINSON.

Absence of anus with abnormal opening of rectum (*Journ. de méd. de Bordeaux*, 1913, XLIII, p. 361).—**Petit de la Villéon** records a case in a male infant, aged 6 months, who had no anal depression, but a punctiform fistulous track opening at the base of the scrotum. The bowels could only be evacuated by repeated injections through this track. As symptoms of obstruction had occurred on several occasions, a recto-plastic operation was performed, when the rectal ampulla was found at a depth of $1\frac{1}{2}$ cm. Complete recovery took place. J. D. ROLLESTON.

Duodenotomy for impacted sewing-machine needle (*Cleveland Med. Journ.*, 1913, XII, p. 193).—**J. J. Buchanan**.—A girl, aged $5\frac{1}{2}$ years, was admitted to hospital four days after swallowing the needle. There had been no abdominal symptoms, and the child was well apart from an attack of whooping-cough. X rays showed the needle at the right of the median line in front of the bodies of the third and fourth lumbar vertebrae. The abdomen was opened the next day, and the stomach, first part of the duodenum, and free part of the second division palpated without result. An opening was then made through the transverse meso-colon, and the end of the needle was felt in the third division of the duodenum. Kocher's method of mobilising the second division was used and the needle extracted. Recovery was uneventful. J. D. ROLLESTON.

Appendicitis in a left inguinal hernia in an infant (*Arch. f. Kinderheilk.*, 1912, LIX, p. 81).—**J. Becker** assumes that in a case in which no situs inversus was present, an abnormally movable caecum existed which permitted displacement of the appendix into the inguinal canal. He has found no similar case in the literature. F. R. B. ATKINSON.

Acute appendicitis in children (*Practitioner*, 1912, LXXXIX, p. 527).—**H. E. S. Stiven** analyses the cases of appendicitis met with in ten years in the London Hospital. Of the 4000 cases, 208 were in children from two to seven years of age, 141 were males, and 67 females. The greater number of cases were admitted during April, July, August and September. Twenty-three cases had faecal concretions. Complications were present in 12 per cent. of the cases, in nine instances with fatal results; 41.8 per cent. ended fatally. The author draws attention to the desirability of early operation in children. F. R. B. ATKINSON.

Appendicitis in the infant (*Journ. de méd. de Paris*, 1912, XXXII, p. 916).—**Perrin** quotes four cases in infants under five years of age. The lesions were always very grave; in three cases there was diffuse peritonitis or multiple abscesses. The symptoms vary much. Sometimes vomiting is the first sign, then abdominal pain and distension and signs of general peritonitis. Sometimes the disease sets in with preliminary constipation followed by abdominal pains and vomiting. Sometimes an habitually constipated infant has vomiting and headache and loses appetite, and after a fortnight or so has bilious vomiting and abdominal pain. More rarely the onset is abrupt, with pains in the right iliac fossa, vomiting, etc., as in older children. A history of preceding constipation followed by vomiting, and later, abdominal pain, is most characteristic. The great danger is rapid general peritonitis, and broncho-pneumonia is a frequent complication. The diagnosis is difficult; gastro-enteritis, intussusception and pneumococcal peritonitis must be excluded. Immediate operation is imperative, and many apparently moribund infants stand it well. J. PORTER PARKINSON.

Relations of appendicitis and pneumonia ('*Thèses de Paris*, 1912-13, No. 169).—**F. Daussy** comes to the following conclusions: (1) Pneumonia, especially in the child, may be accompanied by abdominal symptoms resembling those of appendicitis. (2) In only a small number of cases are these abdominal symptoms due to an abnormal localisation of pneumonia. (3) Pneumonia and appendicitis may co-exist: (a) appendicitis may be only a localisation of pneumococcal infection; (b) appendicitis may favour the development of pneumonia. (4) The mechanism by which appendicitis becomes complicated by pneumonia is not fully known. Probably pulmonary vasodilatation plays an important part, as well as intestinal toxæmia. (5) Clinically two groups of cases may be recognised. In the first pneumonia dominates the scene and the abdominal symptoms disappear rapidly. In the second appendicitis is the most prominent feature, and pneumonia appears later or may even escape recognition. (6) Cases belonging to the first group are usually mild; those belonging to the second group are very grave. (7) In pneumonia with abdominal symptoms the appendix area should be examined, and in appendicitis the lungs should be auscultated. The thesis contains the histories of six cases, four of which are in children from twenty-eight months to twelve years of age (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1909, VI, p. 427).
J. D. ROLLESTON.

Pneumococcal and B. coli peritonitis ('*Brazil-Médico*, 1913, XXVII, p. 62).—**Guimarães** describes an attack of peritonitis in a girl, aged 10 years, in whom peritonitis suddenly developed with vomiting, diarrhœa and pain. On the eighth day an abscess burst spontaneously *per vaginam*; over a pint of pus was evacuated. The suppuration continued and it was decided to abstain from surgical intervention. Suppuration ceased altogether in three weeks and the child made a complete though tardy recovery. The bacteriological examination of the pus showed the presence of pneumococci and *B. coli*.
M. D. EDER.

Strangulated inguinal hernia in a young infant ('*Osp. d. Bamb. d. Milan*, 1912, I, p. 119).—**G. Domenichini** records a successful operation by Bassini's method in a male infant, aged 37 days. Recovery was complete, and the child was in good health when seen three years later. From March, 1905, to July, 1911, sixteen children were operated on for strangulated hernia in the Ospedale Maggiore in Milan. All but one, aged 2 days, were from 4 to 12 months old. Three died, viz. the infant, aged 2 days, one of 4 and one of 9 months.
J. D. ROLLESTON.

Intestinal obstruction by Meckel's diverticulum ('*Gaz. hebdomadaire des Sci. méd. de Bordeaux*, 1912, XXXIII, p. 433).—**J. Brau-Tapie**.—A child, aged 2 years, had vomiting and violent colic after swallowing a quantity of cherries with their stones. The abdomen swelled, and there was absolute constipation. The next day a purgative was given without effect, the abdominal pain increased, and there was frequent vomiting which soon became fecal, while the other symptoms of obstruction were well marked. The abdomen was much distended, and the movements of the bowels were very visible. On abdominal section it was found that the small intestine was strangulated by a loop formed by Meckel's diverticulum, the gut below this being contracted and empty. The child died six hours after the operation, though the autopsy showed the complete removal of the obstruction.
J. PORTER PARKINSON.

Case of intussusception; resection of bowel; recovery (*Austral. Med. Journ.*, 1913, II, p. 889).—**E. T. C. Milligan** and **F. Hobill** removed six inches of large and four inches of small bowel in a baby, aged 4 months, for intussusception, with recovery.
F. R. B. ATKINSON.

Treatment of congenital dislocation of the hip (*Brit. Med. Journ.*, 1913, I, p. 1044).—**A. S. Blundell Bankart** favours the "bloodless reduction" method and describes the technique of reduction and the after-treatment. He offers several criticisms of Lorenz's method. The best results in congenital dislocation of the hip are obtained by manipulative reduction in early childhood, and they are incomparably superior to those obtainable by any other method of treatment.
J. ALLAN.

A case of recurring luxation of the patella (*Arch. de méd. des enf.*, 1913, XVI, p. 363).—**Mme. Nageotte-Wilbouchewitch** describes this case in a girl, aged 15 years, who up to that age had never suffered from this condition. Surgical intervention was being considered to prevent the recurrence, which was continually occurring.
F. R. B. ATKINSON.

An early case of chondro-dystrophy with radiogram and necropsy (*Amer. Journ. Dis. Child.*, 1913, V, p. 18).—**L. E. La Fétra** publishes a very full account of a case of chondro-dystrophy which was admitted to hospital on the first day of life and died at ten weeks. Photographs of the child at one week and ten weeks and a radiogram of the entire body at eight days are reproduced. A skiagram of a premature infant at fourteen days is introduced for comparison. A full pathological and histological report of the autopsy is given.
REGINALD MILLER.

Metabolism in a case of osteogenesis imperfecta (*Med. Record*, 1912, II, p. 317, and *Am. Journ. Dis. Child.*, 1913, V, p. 131).—**H. Schwartz** and **M. H. Bass** report a case of osteogenesis imperfecta in which they had made a study of the metabolism during six days. They found nitrogen metabolism was normal; fat retention and absorption were normal. Particular interest centred round the calcium metabolism, which showed that there was no abnormal failure of calcium retention. The experiments were made during a time when no fractures were occurring, although the skull bones were still very soft; and the study of the calcium metabolism shows that while there was no lack of calcium retention, there was no excess suggesting reparative absorption. The retention of magnesium and phosphorus were also normal. A case of the same disease was mentioned occurring in one of twins, the other child being normal.
REGINALD MILLER.

Scapular crepitation (*Brit. Med. Journ.*, 1913, I, p. 221).—**W. Pearson** showed before the Royal Academy of Medicine in Ireland, a child, aged 7 years, who first came to him about two years ago for creaking in the shoulders, which was first noticed after an attack of measles. Symmetrical crepitations were to be found on moving the scapula. X rays showed nothing to account for this. Massage and fibrolysin injections were tried, but there was no apparent change in the condition. The crackling was quite audible. There might be cartilaginous formation or exostoses which might be so small as not to be shown by the X rays. There was nothing in the muscles to account for the peculiarity, and there was certainly nothing in the joint.
J. ALLAN.

The "key sign" in commencing hip-joint disease (*Gaz. hebdomadaire des Sci. méd. de Bordeaux*, 1912, xxxiii, p. 609).—**H. L. Rocher** comments on the uncertainty of the signs of commencing hip-joint disease in young children. The "key sign" consists in placing the patient on his back, extending the lower limb and seizing it by the foot with the right hand, and in turning the whole limb very gently like a key either outwards or inwards. If the synovial membrane be diseased, or if there be a bony lesion confined to the upper extremity of the femur, there will be a reflex contraction of the muscles of the pelvis and of the thigh, and a slight sensation of pain. The sound side should always be tested first. **CHRISTOPHER ROLLESTON.**

Hydrocephalus in a female child one year and ten months old; operation; recovery (*Austral. Med. Journ.*, 1912, i, p. 825).—**R. B. Duncan**.—The first operation consisted in draining the ventricles, but without result. The right carotid was tied a month afterwards and the left fourteen days later. Soon after the latter operation was performed the child began to crawl about, and after two months her condition was normal for a child of her age. **F. R. B. ATKINSON.**

The results of dorsal root section in the treatment of the spastic state of cerebral diplegia (*New York Med. Journ.*, 1912, i, p. 729).—**L. P. Clark** and **A. S. Taylor** find that forty-one cases have been operated upon by dorsal root section for Little's disease, five of which were personal. They consider that the operation should be largely limited to this disease. The results of the operation are as follows: (1) Relief of spastic contractures; (2) normal defence flexion reflex; (3) diminution of the increased tendon reflexes; (4) improved spontaneous mobility. **F. R. B. ATKINSON.**

Villous tumour of bladder (*Osp. d. Bamb. d. Milan*, 1912, i, p. 115).—**A. Carozzi** records a case in a girl, aged 4 years, who died twenty-five days after exploratory cystotomy without removal of the tumour. Before this operation polypoid masses had presented at the urinary meatus and had been excised, with temporary relief of the pain and difficulty in micturition. Microscopical examination showed the tumour to be a fibro-myxoma. **J. D. ROLLESTON.**

Ninety-six calculi in a pouch of the urethra (*Indian Med. Gaz.*, 1912, xlvii, p. 393).—**G. P. Franklin**.—A boy, aged 8 years, was brought to hospital for inability to pass urine through the proper channel, and a hard swelling the size of a small orange extending along the under surface of the penis from the scrotum to within half an inch of the glans. A fistula opened at the lower end of the tumour through which all the urine passed. No stone could be felt in the bladder, but a director inserted through the fistula passed straight into the swelling, in which numerous stones were felt. On splitting up the fistula a saccular dilatation of the penile urethra was found, from which ninety-six stones were removed, varying in size from a marble to a fig-seed. The fistula was closed, but the swelling reappeared whenever pressure was exercised during urination. **J. D. ROLLESTON.**

Large urethral caruncle in a girl (*Journ. Amer. Med. Assoc.*, 1913, lx, p. 1281).—**C. G. Buford** reports the case of a girl, aged 9 years, who, after a fall, had bleeding from the vulva. At the external meatus there was

a tumour extending about a quarter of an inch upward into the urethra. Its base was spread over almost the entire circumference of the urethral canal and meatus, and was thrown into a vertical fold as it protruded. The surface was not eroded, but there was a purulent discharge from the urethra, in which Gram-negative intracellular diplococci were subsequently found. The tumour was excised, and on microscopical examination proved to be a chronic granuloma. Eighteen months later there was no recurrence, but gonococci were still present.

T. R. WHIPHAM.

Gonococcal urethritis in a boy, aged 17 months (*'Brit. Med. Journ.'* 1913, I, p. 878).—A. Smith and C. S. McKee report this case, which came under observation because of inability of the infant to urinate. A hot bath relieved the condition, but later circumcision had to be done. Four days later urethral discharge was noted and the bacteriological examination demonstrated the presence of gonococci. The source of infection was doubtful.

J. ALLAN.

Acute rheumatic orchitis in a child (*'Journ. Amer. Med. Assoc.'* 1913, LX, p. 1608).—M. H. Bass reports the case of a child of Russian parentage, aged 2½ years, whose illness began with an acute torticollis. The cervical glands became slightly enlarged and patches of erythema nodosum appeared over the skin of the left leg. There was also acute pharyngitis and the urine contained a very faint trace of albumin. When first seen the temperature was 102.5° F. Four days later the scrotum began to swell and the left testicle was found to be enlarged and exquisitely tender. The torticollis by this time had disappeared, but fresh patches of erythema nodosum were present on both thighs. As the scrotum became less cedematous the body of the testis was found to be chiefly involved and the epididymis to a less degree. In the course of a fortnight the testis gradually returned to its normal size without any atrophy resulting. The child was treated with 2 gr. of aspirin four times a day. He had had mumps previously, and at no time during this illness were the parotid glands enlarged.

T. R. WHIPHAM.

Six cases of hydrocele in infants treated by operation (*'Brit. Med. Journ.'* 1913, I, p. 384).—J. H. Nicoll describes the operation, which can be carried out in the out-patient department of a hospital. No local preparation was done until the child was anæsthetised. A skin incision (1 to 1½ inches) is made just above the groin over the inguinal canal, and the spermatic cord exposed just below the ring. The testicle and hydrocele are pushed up into the wound, and the upper end of the hydrocele sac exposed by a few snips of the scissors. The exposed sac is then emptied by trocar and cannula. The collapsed sac with the testicle is then pulled out of the wound, and the sac dealt with—either by tearing out its internal serous lining, by complete excision, or by bisection and suture of its halves back to back behind the testicle. Replacement of the testicle in the scrotum and suture of the wound in the groin complete the operation. The dressing is a pad of sterile gauze fitted by a strip of adhesive plaster. The children are then taken home by their mothers and brought back in a week for removal of dressings and sutures. An excellent plate in illustration of the method is included.

J. ALLAN.

A case of hydrocele cured by auto-serotherapy (*'La Med. de los Niños'* 1913, XIII, p. 359).—Sisternes reports the cure of a hydrocele by

the subcutaneous injection of 2 c.c. of the serous fluid previously withdrawn from the sac. Two hours after the injection the whole of the fluid had become absorbed, there was some oedema of the neighbouring parts and an increase in the quantity of urine.

M. D. EDER.

Sarcoma of the ovary in the infant (*'Arch. de méd. des Enf.,'* 1913, xvi, p. 207).—A. Lesage and Girault found this condition on post-mortem examination in a child, aged 12 months. There were no metastases.

F. R. B. ATKINSON.

Hydatid cysts in children (*'Gaz. hebdomadaire de sci. méd. de Bordeaux,'* 1913, xxxiv, p. 207).—L. Verdet records three cases: (1) Girl, aged 8 years. Suppurating hydatid cyst in perirenal tissue; operation; recovery. (2) Boy, aged 10 years. Hydatid cyst of neck; operation; recovery. (3) Boy, aged 11 years. Multiple cysts of abdomen; death from shock thirty-six hours after operation.

J. D. ROLLESTON.

Disinfection of the skin with tincture of iodine in children (*'Arch. de méd. des enf.,'* 1913, xvi, p. 520).—R. Monod, unlike Codet-Boisse (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1912, ix, p. 520), has never met with any bad results following the use of tincture of iodine as a skin disinfectant in children, and quotes statistics from Broca's service, where this method is exclusively used, to prove its innocuity.

J. D. ROLLESTON.

Reviews.

THE SURGICAL DISEASES OF CHILDREN. By WILLIAM FRANCIS CAMPBELL, A.B., M.D., and LE GRAND KEER, M.D. New York and London: D. Appleton & Co., 1912. Price 25s. net.

THIS book is a comprehensive work on the surgery of infancy and childhood. The authors have freely quoted the work of other authors, and have tried to cover the whole field of the surgical diseases of children. The first sections deal with the examination and diagnosis of diseases in children. There are four chapters on anæsthesia. These chapters are sound in their teaching, and we agree with much that the authors say in regard to anæsthesia in childhood. We think, however, that the importance of the "*status lymphaticus*" as a cause of danger is much exaggerated. We also cannot agree with the authors that the danger of anæsthesia is toxic rather than asphyxial, for we should attribute most of the dangers of anæsthesia primarily to the asphyxial factor. The preparation for operation is thoroughly discussed. The chapter on osteomyelitis is particularly good, and there is a good chapter on injuries in children and their treatment.

The latter part of the book is devoted to surgery in the various regions of the body. The description of the different operative procedures is, in some instances, not very clear. This is noticeably the case in the description of the treatment of club-foot. We are surprised to find that no description is given of the method of treating club-foot by wrenching, since this is now generally recognised as the treatment *par excellence* for this condition. It is stated on p. 657 that should simple tenotomy fail to relieve the

deformity Phelps' operation should be performed. We cannot agree with this, for we think that practically all deformities are better dealt with by tenotomy and wrenching than by the removal of bone. The description of the treatment of hip disease leaves much to be desired. For instance, it is advised that Taylor's sing'e hip splint should be used. This, in our opinion, is very inferior to the double Thomas' splint used in this country, and will almost certainly result in the hip becoming fixed in a bad adducted position. No mention is made of the importance of an abducted position in the treatment of hip disease where fixation of the joint is expected. In the description of prolapse of the rectum in children, treatment by the injection of paraffin wax into the tissues is advised. This we consider bad, and likely to cause serious trouble in later life. We cannot agree with the authors that the operation for inguinal hernia is not safe before the age of two years. In the hands of a good operator this operation should be perfectly safe at any age over six months, and nothing is to be gained by waiting longer.

This book is excellently got up, and is well and clearly illustrated. We think it is one which may be read with advantage by all those specially interested in the surgery of children.

P. L. M.

SCLERO-CORNEAL TREPHINING IN THE OPERATIVE TREATMENT OF GLAUCOMA. By ROBERT HENRY ELLIOT, M.D., B.S.Lond., Sc.D.Edin., F.R.C.S.Eng., etc., Lieut.-Col., I.M.S., Superintendent of the Government Ophthalmic Hospital, Madras, Professor of Ophthalmology in the Medical College, Madras, etc. London: George Pulman & Sons. Price 7s. 6d. net.

THE study of Glaucoma is one of the most interesting in ophthalmic work. For long iridectomy held the field in the operative treatment of this disease, but of late years numerous new operative measures have been devised, including the sclero-corneal trephining, so ably advocated by Elliot. In this volume the author gives a full account of the operation associated with his name.

After a brief introductory chapter, in which he traces the development of operative measures in glaucoma, the author includes two papers from 'The Ophthalmoscope,' in which the more modern operations are discussed. He then proceeds to deal with his operation, and he discusses in turn indications, preparations for, the technique, complications and after-management of sclero-corneal trephining. The account is most lucid, and there should be little difficulty in following the author's various arguments.

How far this operation will be of service in children we do not yet know. We have only seen it done in one child—in a case of secondary glaucoma after interstitial keratitis in which the sclerotic had begun to stretch. The result was fairly satisfactory. We can without hesitation recommend this volume to all interested in ophthalmic problems, more especially glaucoma.

J. A.

LONDON PUBLIC HEALTH ADMINISTRATION. By W. McC. WANKLYN, B.A., M.R.C.S., L.R.C.P., D.P.H. London: Longmans, Green & Co., 1913. Pp. 59. Price 2s. 6d. net.

DR. WANKLYN has written an admirable summary of that complicated network of officialdom, the Public Health Administration of the County of London, which comprises no less than seven different bodies, many of them

concerned with the same work, thus necessitating considerable overlapping and waste of energy. Readers of this JOURNAL may be interested to know that lectures on mothercraft are given to parents by the County Council, but that schools for mothers and infant consultations are provided by the borough authorities. Infant life protection is administered by the county, but the homes seem to be visited by the sanitary and women health visitors of the local medical officers of health department. The cleansing of verminous children, their homes and their parents also seems to require co-ordination. Again, as regards the milk supply the borough authorities test for added water and deficient fat, and may stop milk supply to prevent infection. On the other hand, the London County Council seem to be the only body who has the power to take samples for bacteriological examination for the detection of tuberculosis.

The history of the evolution of this complicated machinery is so admirably and succinctly given that it is to be hoped that the Public Health Department of one of our medical schools will shortly include Dr. Wanklyn on its staff of lecturers.

C. R.

INSOMNIA: ITS CAUSES AND TREATMENT. By Sir JAMES SAWYER. Second edition. Birmingham: Cornish Bros., 1912. Price 2s. 6d. net.

THIS little book consists of three chapters, the first two of which appeared as clinical lectures in the 'British Medical Journal' in 1903 and have since been revised, re-written and enlarged, while the third is a reproduction of the author's article on insomnia in Hutchison and Collier's 'Index of Treatment.'

In the first chapter, which is devoted to the causation of the disease, symptomatic is distinguished from intrinsic insomnia and the varieties and symptoms of each kind are discussed. The second chapter, which deals with treatment, is full of valuable practical suggestions, and contains on page 87 some apposite remarks on the cause and cure of sleeplessness in children. The third chapter contains an admirable summary of the physiology, pathology, ætiology, varieties and treatment of insomnia.

The work is the outcome of a long and successful experience and as such will be read with interest by every practitioner, while to the layman into whose hands it may fall we would recommend the shrewd advice given on page 81: "Patients suffering from insomnia recover normal sleep more quickly under frequent interviews with their medical adviser but when such meetings are 'few and far between.'"

J. D. R.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY: TWENTY-FOURTH SESSION. Edited by LINNAEUS EDFORD LA FÉTRA, M.D. Vol. xxiv. Chicago: American Medical Association Press, 1912.

THIS volume contains twenty-four papers, most of which have appeared elsewhere and have already received or will shortly receive notice in this JOURNAL. Among the more interesting may be mentioned papers on "Typhoid Fever in Infancy," by J. P. Crozer Griffiths; "Serum Treatment of Pneumonia," by R. G. Freeman; "The Wassermann Reaction in Infants and Children," by Frank Spooner Churchill; "The Employment of Salvarsan in Infants and Young Children," by L. E. La Fétra; and "Acute Yellow Atrophy in a Child Three years of Age," by Francis Heber. Instructional articles on various aspects of infant feeding are contributed by H. L. Coit, D. M. Cowie, P. J. Eason, J. L. Morse and T. S. Southworth.

An index of authors and subjects for vols. xv to xxiv inclusive is appended.

J. D. R.